

Emotion Understanding and Attachment Representations in Middle Childhood:
A Longitudinal Validation of the Affect Task

By

Kiara Schlesinger

Abstract

One of the primary functions of the attachment behavioral system is to regulate emotional experience under conditions of threat. Although research supports this association among infants and adults, few studies examine the relation between emotion and attachment in middle childhood. The present study sought to provide further evidence for the predictive and concurrent validity of the Affect Task, a cartoon-based measure depicting socially ambivalent scenarios that prompts for representations of attachment figures, affect regulation and coping strategies, and the consideration of the possibility of mixed or sequentially distinct emotions. Twenty children participating in an afterschool program called 'I Have a Dream' (IHAD) were followed from elementary school to late middle school. The Affect Task was administered at Time 1 (age 7) and Time 2 (age 9); while the Strengths and Difficulties Questionnaire, an observer-based measure of emotional and behavioral function was completed by counselors at Times 1 (age 7), 2 (age 9), 3 (age 11), and 4 (age 13). Overall, children who had higher levels of felt security and emotion understanding as indicated by Affect Task responses had significantly lower levels of observed emotional and behavior problems both concurrently and predictively at Time 2 and Time 3, but not Time 4. There were decreased total difficulties observed

over time with continued participation in the IHAD program. This study highlights the importance of afterschool programs in high-risk communities as interventions aimed at providing positive social, emotional, and academic support.

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Kiara Schlesinger

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Dissertation Committee:

Dr. Howard Steele

Dr. Miriam Steele

Dr. Joan Miller

Dr. Ken Wark

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The original Dreamer class founded by Eugene Lang in 1981



In 1981, businessman Eugene M. Lang returned to P.S. 121, the elementary school he had attended in East Harlem 50 years earlier, to address a class of graduating sixth graders.

He intended to tell the students, "Work hard and you'll succeed." But on the way to the podium, the school principal told Lang that three-quarters of the school's students would probably never finish high school, prompting Lang to make an impromptu change to his speech: he promised college tuition to every sixth grader who stayed in high school and graduated. Lang told the class about witnessing Dr. Martin Luther King, Jr.'s famous "I Have a Dream" speech at the 1963 March on Washington. He urged the students to dream their own dreams, and promised to do all that he could to help them achieve their goals.

"One day, all children in the New York metro area will have the opportunity to pursue higher education and to fully capitalize on their talents, aspirations, and leadership to have fulfilling careers and create a better world."

—vision of 'I Have a Dream Foundation'

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To my family

Thank you for standing by me through years of late nights, stress, and many cups of tea. Your unconditional love, support and sense of humor have allowed me to achieve my dreams.

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Part I: A Literature Review

Introduction

Attachment theorists widely acknowledge the primacy of early caregiver-child relationships for the development of emotional regulation (Cassidy, 1994). Although research supports this association among infants and adults, few studies examine the relationship between emotion and attachment in middle childhood. Middle childhood, from 6-11 years of age, is a crucial stage in development when children begin to have sustained encounters outside of their families and to navigate their own way through societal structures (Coll & Szalacha, 2004). In contrast to traditional portrayals of middle childhood as a period of psychological latency, contemporary studies have shown that remarkable advances in conceptual skills and social competence take place during this time period (Raikes & Thompson, 2005). Kerns & Richardson (2005) note the importance of this developmental time period, as many of the problems that emerge in adolescence (e.g. school dropout, delinquency, drug use, etc.) have its antecedents in middle childhood, making this a critical time for preventative interventions.

Individual differences in children's social cognition and emotion understanding have been intensively investigated in the past two decades, and studies suggest that these differences emerge quite early among preschool age children (Berlin & Cassidy, 2003; Borelli et al., 2010; Brown & Dunn, 1996; Carpendale & Lewis, 2004; Cassidy, 1994; Denham, 1998; Dunn & Cutting, 1999; Ekman, 2003; Houlberg et al., 2012; Izard, 2008; Ontai & Thompson, 2008; Pons et al., 2004; Pons et al., 2003; Saarni and

Harris, 1989; Saarni, 1999; Sroufe, 1996). However, fewer studies have looked how these differences correlate with other characteristics of these children and their social networks, and even fewer have a longitudinal design to assess the stability and change of these individual differences. It has been postulated that the quality of the attachment relationship between children and their primary caregivers have an influence on children's emotion understanding; however, despite the vast research assessing children's understanding of emotions, there have been few studies utilizing performance-based measures, especially within an attachment framework. An argument is made here, that a focus on the child's understanding of emotion using a performance based measure offers much promise, especially as possibly distinct representations or thoughts about mother and father can be considered in relation to children's rapidly developing thoughts and feelings about social dilemmas.

This paper reviews attachment theory and emotional development, highlighting an absence of consensus on how best to measure these processes in middle childhood. This dissertation addresses a contemporary approach, whereby a performance-based assessment developed using an attachment theory framework is presented here as a pioneering measure aimed at capturing the complex construct of understanding of emotions in children aged from 6 to 11 years old. Lastly, research on attachment and emotional competence is linked to observable behavior differences in middle childhood, and the role of afterschool programs as interventions aimed at high-risk children is explored. This leads to an introduction to the current research study inspired by the previously mentioned literature review.

Emotional Development

Emotions are central to our everyday experience and influence how individuals understand and make sense of both themselves and the world. Although several discrete emotions emerge in infancy, including: joy, interest, sadness, anger, fear, and disgust, it is not until 3 years of age that the emotional life of the child becomes highly differentiated (Izard & Ackerman, 2000). Complex emotions, such as shame, guilt, and contempt, are thought to emerge in middle childhood, as a function of both maturational and social processes (Lewis, 2000; Thompson, 1989;). Each of these emotions has a unique adaptive function in motivating, organizing, and regulating behavior; and plays an important role in the development of personality and individual differences in responding to environmental challenges (Izard & Ackerman, 2000).

As we progress from infancy to adulthood, the emotional experiences and demands of the social world become increasingly complex; therefore, a sophisticated understanding of emotion is critical. Emotion development involves perception, expression, understanding, and regulation of emotion. For the purposes of this dissertation, the majority of the focus will be on the concept of emotion understanding. Harris and Saarni (1989) characterize emotion understanding as a child's ability to decode another person's emotional state. Although studied on its own as a developmental construct in children, emotion understanding is often studied as part of the larger construct of emotional intelligence (Young, 2005).

Emotional Intelligence. Since its introduction over two decades ago by Salovey and Mayer (1990), the term emotional intelligence has come to refer to a

broad constellation of abilities, competencies, and dispositions related to perceiving, expressing, understanding, and regulating emotion. Emotional intelligence was first defined as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them, and to use this information to guide one’s thinking and action.” (Salovey & Mayer, 1990, p. 189). More specifically, Mayer and Salovey (1997) describe emotional intelligence as involving:

“the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth.” (p. 10)

The skills identified in this model are arranged from basic to more sophisticated, higher order processes. Its most fundamental level concerns the accuracy with which individuals perceive, appraise, and express emotion. Infants and young children learn to identify their own and other’s emotions in facial expressions and physical states. As children grow, they imaginatively attribute feelings to both animate and inanimate objects. This imaginative thinking may help the child generalize their individual experience to others, and builds upon the ability to recognize and identify emotions in people, artwork, animals, etc. through language, sound, appearance, and behavior (Mayer & Salovey, 1997). Children also develop the ability to accurately display emotions and express needs related to those feelings.

Mayer and Salovey (1997) term the next level the emotional facilitation of thinking, which describes how emotional events assist intellectual processing. Emotion

serves as an alerting system from birth, insofar as the infant cries “when it needs care and laughs in response to smiles and other pleasures” (p 12). Emotions operate from the start to signal important changes in the person and environment, and prioritize thinking by directing attention to this information. Additional contributions of emotion to thinking include the ability to generate emotions at will so that they can be better understood. Mayer and Salovey (1997) use the example of children generating feelings within themselves so as to better understand how another person feels. As development progresses the ability to generate feelings helps to assist with planning, decision making, and problem solving.

The next highest level of processing concerns the ability to understand emotion and use emotion knowledge. According to Mayer and Salovey (1997), this area of emotional intelligence involves the development of a more sophisticated emotional vocabulary. Children develop the ability to label emotions and recognize relationships between these labels and their own emotional experience. Additionally, children begin to recognize that many emotions fall along a continuum of intensity and are related to each other (i.e. liking and loving, annoyance, and anger, etc.). Parents begin to teach children about emotion understanding by linking emotions to situations. The growing child also begins to develop the ability to recognize the existence of complex, contradictory, or simultaneous combinations of emotions (Mayer & Salovey, 1997).

The highest level of processing involved in emotional intelligence is considered by Mayer and Salovey (1997) to be the conscious regulation of emotions. This involves the ability to tolerate emotional reactions (both pleasant and unpleasant), and

learn that emotions can be separated from behavior. This, in turn, leads to the ability to engage or detach from an emotion at appropriate time, and consciously monitor and reflect on one's emotional experience and mood, as opposed to simply perceiving one's feelings.

These emotional skills help a child to behave prosocially, develop friendships, respond appropriately to conflict, focus attention and achieve other important developmental goals, and are closely linked to social competence, academic achievement, language and cognition, physiological development, and physical health as well as to behavioral adjustment (Goleman, 1995; Denham, 1998; Saarni, 1999). In contrast, internalizing (e.g. depression and anxiety) and externalizing disorders (e.g. oppositional behavior, hyperactivity) are often seen as a breakdown in emotion skills development (Kidwell, 2010; Southam-Gerow & Kendall, 2002).

Emotion understanding. Emotion understanding is an important skill on its own and one closely linked up with the highest level of emotional intelligence in the model advanced by Mayer and Salovey (1997), tied to social competence, emotion regulation, empathy, prosocial behavior, and mental health. Emotion understanding refers to the conscious knowledge about emotion processes (Southam-Gerow & Kendall, 2002), including the ability to recognize and label one's own and others' emotions, relate them to situations, understand their causes, identify familial and cultural display rules, and recognize disparity between emotional displays and felt emotion (Blankson et al., 2013; Denham, 1986; Denham, 1998). Emotion understanding provides children with a more accurate interpretation of the affective

antecedents of behavior as well as the emotional consequences of their own behavior in other people. Knowledge about emotions allows children to communicate their own emotional experiences effectively and respond appropriately to the emotional signals of others, thereby enhancing social competence (Denham et al., 2003; Leerks, et al., 2008).

Researchers have identified nine components of emotion understanding, and classified these components into three broad categories: *external*, *mentalistic*, and *reflective* (Pons et al., 2004; Tennenbaum et al., 2008). Previous investigations have focused on the age at which these components emerge, identifying a universal trend that proceeds from the recognition of expressed emotion to the more complex ability of reflecting on other mental states as understanding that a person's emotions are related to their own unique inner expectations (Albanese et al., 2010). The research indicates that children's understanding of emotion is organized in a hierarchy, with the earlier mode of understanding being a sufficient, if not necessary, condition for the emergence of later modes (Pons et al., 2003; Pons et al., 2004).

External understanding of emotions includes recognizing and naming emotions on the basis of expressive cues, understanding how external causes affect the emotion of others, and appreciating that people's emotional reaction depend on their desires. Early on, children rely on facial expressions to label emotions. Over time they gradually develop the ability to use situational cues when making emotional inferences (Brown & Dunn, 1996). This stage of emotion understanding is also when children have begun to internalize the relation between memory and emotion, such that they

increasingly understand that the intensity of an emotion decreases with time and elements of a present situation can recreate a previous emotional response (Pons et al., 2004; Tenenbaum et al. 2008). In an extensive review of the literature, Pons et al. (2004) found that children begin to understand these aspects of emotion by age three, and the majority demonstrates mastery of these concepts by age five. Beginning in middle childhood (around the age of 6 or 7) children begin to use more complex interpretations of emotions. At this age, children start to understand that emotions are not just situation specific, and that individuals experience and express emotions differently.

Mentalistic understanding of emotion comprises hidden affect (the discrepancy between the outward expression of emotion and the actual felt emotion) and the knowledge that desires and beliefs produce emotional reactions (Pons et al., 2004; Tenenbaum et al., 2008). Along with growing understanding of others' personalized reasons for emotions, older children increasingly need to follow and understand cultural, familial, and personal rules for expression of emotion, also known as display rules (Denham, 1998; Denham & Kochanoff, 2002). Hiding emotions or modifying emotional expression can be advantageous to young children in order to conform to socially or personally appropriate display rules. Denham and Kochanoff (2002) suggest that minimizing, masking, or substituting emotional expressions is valuable in maintaining social relations and underlying emotion regulation. However, this capacity to comprehend display rules serving these functions is rudimentary prior to middle childhood (Denham & Kochanoff, 2002).

Reflective understanding of emotions underlies the concept of mixed, and moral emotions, as well as the cognitive regulation of emotion (Pons et al, 2004). This stage of emotion understanding is most relevant to the current study, and is characterized by awareness that an individual can reflect upon a situation from various perspectives and thereby trigger different feelings. It is during this period of development that children begin to understand that a person might have multiple or even contradictory emotional responses to a situation (Brown & Dunn, 1996; Steel et al., 1999; Denham & Kochanoff, 2002; Pons et al., 2004; Southam-Gerow & Kendall, 2002; Vitulic, 2009), and that negative feelings can ensue from a morally reprehensible action and positive emotions can be a result of a praiseworthy action (Pons et al., 2004). Children evoke different strategies for emotional control as they develop. Younger children tend to seek support and refer mainly to behavioral strategies (Denham, 1998; Denham et al., 2003; Sala et al., 2014), whereas older children begin to acknowledge that cognitive or psychological strategies (i.e. problem-solving, denial, distraction, etc.) can be more effective (Harris, 1989; Pons et al. 2004).

As noted above, as children age they not only develop a broader range of emotional concepts, but also increasingly begin to appreciate the complex psychological dimensions of emotion experience (Thompson, 1989). This growth in emotion knowledge helps children interpret their feelings in situations that foster ambivalent or conflicting reactions. It also fosters more acute interpretation of the direct emotional displays of others by increasing awareness that overt manifestation of emotional expression may mask underlying feelings. This growth of emotion

knowledge is also important as it increases children's competence at inferring emotions in others when direct cues are lacking (Thompson, 1989). The ability to understand the causes and consequences of emotion, as well as emotional display rules, seem to be important aids in managing one's own emotion and effectively responding to emotions in others (Denham, 1998). Those high in emotional understanding are better equipped to deal with social conflict and use emotional dialogue to discuss their own and others' emotional experiences (Denham, 1998; Labile and Thompson, 1998). Children's development of gradually more sophisticated understanding of emotion fosters many adaptive processes. Prior research has shown that emotion understanding is related to positive peer status and increased prosocial behavior (Denham, 2002), conflict resolution skills (Dunn and Cutting, 1999), and that children who have highly developed emotion understanding skills are more likely to be seen as socially competent by teachers (Denham, 1998). Conversely, children with deficits in emotion understanding are also reported to have more behavior problems (Cook et al., 1994), and deficits in emotion understanding are associated with various forms of psychological distress (Southam-Gerow, 2002).

Pons and his colleagues (2004) emphasize that longitudinal research has shown that there are marked differences in emotion understanding, even among typically developing children. These differences appear to be associated with earlier variations in the family environment, especially related to the way caretakers vary in the sensitivity with which they respond to the infants emotional signals (Bowlby, 1982; Bretherton, 1985; Easterbrook & Abeles, 2000; Harris, 1994; Pons et al., 2004; Steele

et al., 1999). As such, studies examining individual differences in emotional development and competence may benefit from approaching the topic from the framework of attachment theory and research, with its extensive evidence base for understanding individual differences in early emotional and social development (Ainsworth, Blehar, Waters & Wall, 1978).

Attachment theory

Attachment theory, originally developed by John Bowlby (1958; 1969) to explain the importance of social bonds between infants and their caregivers, is among the most influential theories of personality development. This is, in part, because of the reliable and valid findings arising from the work of Mary Ainsworth and colleagues (1978) who showed that infant-parent patterns of attachment could be measured with a 20-minute observational task known as the Strange Situation. Diverse longitudinal studies have shown that infant-mother attachment security (or lacks thereof) at one year has a lasting influence on the child's social and emotional development and psychological well being throughout childhood, adolescence and into adulthood as an important volume on 'the major longitudinal studies' of attachment attested to (Grossmann, Grossman & Waters, 2005).

The underlying premise of attachment theory is that early experiences with the emotional availability of primary caregivers in their lives shape their feelings of felt security and trust in others (Bowlby, 1980). The quality of caregiving differs widely, and these variations in caregiver behavior lead to the development of individual

differences in patterns of attachment children show to their mothers and fathers. These patterns fall on a continuum that can be categorized as very adaptive and beneficial, to possibly harmful to the child (Crowell, 2003), and serve to regulate the physiology and behavior of the infant (Boris et al., 2000) with long term implications for personality development (Sroufe, 2005). Infant-parent attachment classification are statistically independent (Steele, Steele & Fonagy, 1996), and are thought to indicate distinct representations in the young child's mind concerning the availability and responsiveness of each of their attachment figures.

In other words, a child may be securely attached to mother but insecurely attached to father. This is the case during infancy, when an infant's response to reunion (following two brief separations) in the Strange Situation (Ainsworth et al., 1978; Ainsworth, 1979; Main and Cassidy, 1988; Main and Solomon, 1990) yields one of four principal classifications: (1) *secure* infants who feel confident that the attachment figure will be available to meet their needs. These children use the attachment figure as a safe base to explore the environment and seek them out in times of distress; (2) *insecure-avoidant* infants that do not orient to their attachment figure while investigating their environment, tending to be both emotionally and physically independent. These children do not seek contact with the attachment figure when distressed, and are likely to have a caregiver who is insensitive and rejecting of their needs; (3) *insecure-resistant* infants that tend to adopt an ambivalent behavioral pattern towards the attachment figure. These children have difficulty moving away from the attachment figure to explore novel surroundings; however, when distressed

they are difficult to soothe and not comforted by the interaction with the attachment figure; and (4) *disorganized* infants exhibit an array of fearful, odd, disorganized, or overtly conflicted behaviors, and lack any organized strategy for dealing with distress or separation or seeking comfort.

Attachment in infancy versus attachment in adulthood. Attempts to translate Ainsworth's infant attachment classifications into corresponding adult patterns have also inspired empirical exploration of intergenerational patterns of attachment, which led to a flurry of empirical reports between 1985 and 1995 (Ainsworth and Eichberg, 1991, Benoit & Parker, 1994, Fonagy et al., 1991; Grossman et al., 1988; Main, Kaplan & Cassidy, 1985; Slade et al., 1991; van IJzendoorn et al. 1991; Steele, Steele & Fonagy, 1996; Ward & Carlson, 1995; Zeanah et al., 1993). Highly influential among these studies was the report by Main et al (1985) introducing the Adult Attachment Interview (a paper that has been cited over 4,700 times as of May 23, 2015). In the Adult Attachment Interview (George, Kaplan, & Main, 1984) parents are asked open-ended questions about their relationship with their attachment figure in childhood, and about the influence of these early relationships on their own development. This interview draws upon metacognitive skills in reflecting on past relational experience, and is designed to assess a person's state of mind in regard to attachment rather than the quality of a particular relationship (Kerns et al., 2005). Three distinct patterns of responding were identified: (1) *autonomous-secure* parents gave a coherent account of early attachments, regardless of satisfaction with these early attachment relation; (2) *preoccupied* parents spoke of many conflicted childhood

memories of attachment, but could not organize them into a consistent, coherent picture; and (3) *dismissing* parents were characterized by an inability to remember much about childhood attachment relationships. Later a fourth type of response that may overlap with these former three was identified, i.e. the *unresolved* regarding past loss or trauma (Hesse & Main, 1990). Not only did these the Adult Attachment Interview classifications correspond to Ainsworth's secure, insecure avoidant, and insecure resistant infant patterns (and disorganized responses) at a conceptual level, but also in a pioneering study Main et al. (1985), investigators found that these adult patterns were empirically correlated with infant patterns of attachment. Steele, Steele, and Fonagy (1996) validated these findings for prenatally administered interviews to expectant mothers and fathers, with statistically independent (as mentioned above) lines of influence from fathers' interviews to the infant-father attachment (at 18 months) and from mothers' interviews to the infant-mother attachment (at 12 months). But it remains a mystery of sorts as to how these distinctive patterns of attachment in infancy evolve into a global set of thoughts and feelings about attachment in adulthood enabling a single classification to the AAI as secure or insecure (dismissing, preoccupied, unresolved). The answer must lie, in part, in measuring attachment processes between early childhood and adulthood with a view to examining the extent to which the child shows a meta-cognitive or reflective understanding of self, others and emotion – the hallmark characteristics of a free-autonomous response to the AAI.

Attachment in middle childhood. Despite a rich literature on attachment theory and research going back to the 1950s, it was not until 2005 that a book appeared

with the title ‘Attachment in Middle Childhood’ (Kerns & Richardson, 2005). In contrast to the well-established research concerning other stages of development, namely early childhood and adulthood, less is known about attachment organization and functioning in middle childhood (Nickerson & Nagle, 2005). Bowlby (1987; cited in Ainsworth, 1990; Kerns, 2008) suggested that the goal of the attachment system shifts from proximity of the attachment figure in early childhood to the availability of the attachment figure in middle childhood. There also may be a decline in the range of conditions that elicit a need for the attachment figure, partly because of the child’s increased self-reliance and partly due to expectations regarding greater child autonomy (Kerns, 2008).

Raikes and Thompson (2005) describe middle childhood as a unique developmental period for the growth of attachment, “in which the attachment behavioral system becomes a more fully representational system and attachment security begin to be characteristic of a person, not just a specific relationship” (p. 255) and must be understood in terms of its’ own developmental characteristics, rather than as a developmentally upward extension of the behavioral attachments of infancy, or a downward extension of the representational sophistication of adulthood. Raikes and Thompson (2005) go on to state that:

“In contrast to some traditional portrayals of middle childhood as a period of psychological latency, remarkable advances in conceptual skills and social competence takes place during this period. The

sophistication of thinking improves, influencing how children view themselves and others, and these changes provide a foundation for growth in social skills and social cognition...Children's social worlds expand, and their relationships with peers and other adults become more intense and complex." (p. 257)

In addition to peer groups taking on a greater salience in middle childhood, there are advances in emotion understanding, metacognition, cognitive flexibility, self-awareness, and a greater capacity to regulate emotions (Raikes and Thompson, 2005). There are also important changes in parental supervision, with a shift from parental control to parent and child co-regulation (Kerns, 2008).

Individual patterns of adaptation, established first in early childhood with attachments to parents, elicit reactions from the environment that consolidate and elaborate these adaptations. Sroufe and colleagues (1999) suggest that children with insecure attachment histories have stunted affective communication and emotional exchange. These children tend to be focused inexplicably on the caregiver, and consequently might have difficulties assimilating later experience onto their self-schema (Ivarsson, 2008). As a result, when these children experience distress they may fail to directly signal a need for support and become embroiled in negative emotions. Research has demonstrated that, across the lifespan, individuals differ in how they process information from their social environment. Information related to emotional understanding in social relationships and interactions is often processed with varying

degrees of objectivity, accuracy, and positivity. These variations in socially oriented information processing have been linked to the quality of individuals' social and emotional functioning throughout development (Crick & Dodge, 1994). Although these previously cited studies on social information processing tended to use larger sample sizes ($N > 100$), many longitudinal studies assessing attachment patterns and later representational processes have used more modest samples ($N < 50$) (Arnott & Meins, 2007; Easterbrook et al. 2000; Freitag & Belsky, 1996; Grossman et al, 2002; Gloger-Tippelt et al, 2002; Lyons-Ruth et al, 1997; Main et al, 2005; Meins et al, 1988; Papini & Roggman, 1992; Symon & Clark, 2000).

Interplay between attachment and emotion understanding

One of the most important contributions of attachment theory has been providing a developmental framework for understanding how infant-parent relationships affect the cognitive-affective structures that children use to understand and cope with the world throughout childhood (Borelli et al., 2010; Cassidy, 1994; Greenberg, 1999; Moss et al., 2006). Previous literature has demonstrated that early attachment behaviors are linked to later patterns of emotional expression and affect regulation, since attachment figures are responsible for helping young children regulate and express emotions. In the context of early family relationships, the mother-child relationship in particular, how the attachment figure responds and the child's sensitivity to the psychological states of the of the attachment figure, "may be the mechanism through which the child first comes to acquire an understanding about the content of, and rules for displaying desires, feelings, knowledge, and action" (Steele et

al., 2002, p. 862). Early attachment relationships to mother, the argument goes, offer children the means to simultaneously attend to and use information related to internal states to interpret behavior of others (Steele et al., 1999). Mother-child discourse about emotions is also vital in understanding the influence of attachment security on children's emotional understanding (Harris, 1999; Mcquaid et al., 2008; Ontai and Thompson, 2008). Secure attachment relationships are characterized by open communication, where parents validate and acknowledge children's displays of both positive and negative emotions, facilitating children's thinking about mental states that underlie emotional behavior (Fonagy et al., 1991; Laible and Thompson, 1998), and enabling children to readily understand and regulate their emotions (Cassidy, 1994).

Through continual and repeated interactions with their primary caregivers (attachment figures), infants form mental representations of the self and others, and develop expectations about interpersonal relationships and social interactions (Bowlby 1969/1982; 1973). These expectations, or 'internal working models', are believed to organize the regulation of affect, and subsequently appraise and guide behavior in new situations (Bowlby, 1973; Bretherton, 1985; Bretherton, 1990). Internal working models of attachment figures and self, once in place, tend to operate outside conscious awareness (Bretherton, 1985) and reflect the quality of the relationship with the primary caregiver.

Internal working models influence the way a child relates to the social and physical world, and affects the way a child resolves later developmental issues. Social competence develops, in part, from the ability to regulate emotions and make use of

social comparisons (Burgess & Rubin, 2000). Children who have experienced their caregiver as sensitive and responsive in infancy will tend to not only develop an internal working model of the attachment figure as loving, but also of himself as a person worthy of comfort and support (Bowlby, 1973; Bretherton, 1985), and are then assumed to have positive expectations of later social interactions. Conversely, if an infant develops an internal working model of the caregiver as rejecting or unpredictable, they are more likely to experience themselves as less deserving of having their emotional needs met. These resulting maladaptive views of the self and others can put the child at risk for aggression, dependency, and impulse control problems (Fearon & Belsky, 2011), and increases the risk for psychopathology. (Cummings & Cicchetti, 1990; Dozier et al. 1999; Egeland & Carlson, 2004; Greenberg, 1993; Lyons-Ruth, 1996; Wallis & Steele, 2001). These children often approach new social encounters expecting rejection or unresponsiveness, which causes them to behave in ways that bring about adverse experiences (Erickson et al., 1985; Finnegan et al., 1996; Sroufe and Fleeson, 1986).

Steele, Steele and Johansson (2002) reported on the Affect Task, a cartoon-based set of drawings depicting children, siblings, peers, teachers and parents in social dilemmas, and judged 11-year olds' responses in terms of individual differences in social cognition. They capitalized on the fact that as children develop they acquire a greater ability for abstract reasoning, they also develop greater capacity to reflect on themselves and their experience, and gain insight into the underlying mental, emotional, and motivational origins of people's actions. Steele et al (2002) showed that

maternal (not paternal) responses to the AAI predicted 11-year olds' ability to acknowledge distress and propose a resourceful coping response (to the pictured dilemmas). They posited that mothers might have a distinctive role to play in helping children acquire a lexicon for describing inner feelings. Fathers they have suggested may be more relevant to the domain of social adaptation beyond the mother-child orbit (Steele & Steele, 2005). This view about the possibly distinctive influence of mothers was previously supported by their work with 6-year olds' responses to the Affect Task judged in terms of the children's understanding of mixed emotions. Yet this pioneering work with the Affect Task did not compare children's responses with teacher or self-reports of emotional and behavioral problems.

Research has suggested that young children who perform better on measures of emotion understanding also demonstrate higher levels of prosocial behavior with their peers and are more popular with their peers (Denham, 1986; Dunn & Cutting, 1999). Other research has linked emotion understanding with high levels of pretend play and behavioral and emotional competence with peers (Lindsey & Colwell, 2003). Adversely, poorly developed emotion understanding likely puts children at risk for negative social, emotional, behavioral and educational outcomes (Asher & Coie, 1990; Asher & Wheeler, 1985; Ladd, 1990). Thus, identifying children who have difficulties with emotion understanding at an early age is critical, so that any deficits can be addressed, and a return to normal development may be promoted. Difficulties with the regulation of emotion are commonly noted among young children and these difficulties may persist when family support is limited (Dodge et al., 1985). After-

school programs, with a concentrated focus on support, both with homework and social relationships, can have positive effects on children's emotion regulation skills and emotion understanding (Hammond et al., 2009; Houlberg et al., 2012).

Assessing emotion understanding and attachment in middle childhood

It has been recognized in the literature that cognitive development during middle childhood fuels more advanced awareness and understanding of emotion and emotional regulation (Saarni, 1999); however, there are significant gaps in the extensive literature on emotion understanding in middle childhood. Research on emotion understanding in children past age 6 is impeded by the lack of empirically supported assessment methods for these age groups (Erklin, 2011).

The lack of research on attachment and emotional development is somewhat surprising, given the central role of emotion in attachment (Kerns, 2008). Attachment theorists widely acknowledge the primacy of parent-infant relationships for the development of emotion understanding and regulation (Cassidy, 1994; Borelli et al., 2010). Several longitudinal studies have related functioning in middle childhood to attachment classifications from infancy (Bohlin et al., 2000; Jimerson et al., 2000; Kim, 2013; Warren et al., 1997). However, it would seem beneficial to use a measure that assesses attachment in middle childhood itself, as attachment relationships are not absolute and constant and may change as the child's environment changes (Waters et al., 2000). As children enter the school years and begin to develop autonomy, their social world extends to include peers and teachers. Therefore, a successful measure of

attachment in middle childhood should include representations of peers and teachers in order to provide information about the child's current relational climate and state of functioning. Similarly, if an attachment measure in middle childhood is valid it must be linked to social emotional development and mental health.

Sufficient methods for assessing attachment and emotion understanding in middle childhood are limited, with techniques ranging from behavioral observations, to picture responses and doll play, to interviews and rating scales. Crittenden and colleagues (2010) suggest that the lack of consensus around the existing assessments reflect several issues. Firstly, there is confusion regarding what exactly is being assessed. The gold standard for assessing attachment in infancy (the unique affective to bond to a specific caregiver) is the Strange Situation Procedure (Ainsworth, Blehar, Waters, & Wall, 1978) while the Adult Attachment Interview assesses adult state of mind with regard to attachment (George, Kaplan, & Main, 1984). However, attachment in middle childhood needs a more explicit and developmentally appropriate definition (Mayseless, 2005). Existing assessments "may emphasize characteristics of younger children or assume those of adolescents and adults" (Crittenden, 2005, p. 186). The conceptualization of attachment used in existing assessments tends to uphold the constructs developed to assess attachment patterns in infants (i.e. the ABCD model; secure, insecure-avoidant, insecure-resistant, disorganized). In middle childhood, attachment security may not be easily identified by means of behavioral measures (e.g. separation and reunion) because the intensity and frequency of attachment behaviors decline (Bowlby, 1973; Main & Cassidy, 1998).

Secondly, attachment measures in middle childhood should encompass the broadening social world of the child, their burgeoning social competency and emotion understanding, as well as tap into their coping skills. These measures also must be able to capture the attention of school-age children, and appropriately engage them. To date, the empirical research on emotion understanding has focused primarily on younger children. Studies with infants, toddlers, and preschoolers dominate the literature and there is significantly less attention paid to middle childhood as a developmental period. The lack of research on emotion in middle childhood is due, in part, to a paucity of empirically validated assessment methods for older children (Erklin, 2011). To demonstrate validity, measures of attachment and emotion understanding used in middle childhood need to correlate with independent measures of mental health, in order to identify children in need of clinical intervention.

Developing and validating the affect task

Research has demonstrated that throughout the school years, children gradually develop an understanding of how people's emotions, beliefs, and actions are interrelated (Harris, 1989; Tennenbaum et al., 2008). Children's ability to understand the emotional experience of themselves and others contributes to their self-awareness, emotional regulation, social competence and ability to form positive peer relationships (Denham et al., 2003), and predicts academic performance (Izard et al., 2001). Given the importance of children's emotion knowledge and understanding to future social and academic outcomes, it seems pertinent to create and validate a measure that would

identify early deficits in order to implement interventions when needed. Pons, Harris, and de Rosnay (2004) suggest that an assessment procedure should not only provide a standardized way to identify a child's general level of emotion understanding, but such an instrument should "also allow children's understanding of emotion to be systematically introduced as either an explanatory variable or as a variable to be explained both in clinical and developmental psychology" – e.g. in the context of attachment, theory of mind, metacognition, individual differences, and social behaviors and representations (p. 149).

Brown and Dunn (1996) cite that one of the hallmarks of emotion understanding in middle childhood is the appreciation of mixed or ambivalent emotions. They note that while a number of studies have been devoted to delineating a normative progression in the development of mixed emotions, very few have looked at the extent of variability in this developmental construct. Although it had been previously argued that the child's progression through the age-related stages in the expression and understanding of emotion were solely dependent on advances in language and cognition, Brown and Dunn (1996) suggest that individual differences in these abilities were related to the family context in which the child develops. Steele et al. (1999) support and extend these earlier findings, by demonstrating that a six-year old has an increased capacity to identify mixed or ambivalent emotions if they have had the benefit of a secure attachment to their mother at one-year of age, independent of language skills. This suggests the value of focusing on socioemotional rather than cognitive determinants of emotion understanding.

The Affect Task was an attempt to develop a measure of emotion understanding in children using an attachment framework, and assess a child's ability to correctly identify and resourcefully discuss facial expressions. The measure was first developed as an interview technique in a longitudinal research study (Steele, Steele, Croft & Fonagy, 1999), and has been used in subsequent attachment related studies (Steel, Steele & Johansson, 2002; Steele & Steele, 2005). Its' development was strongly influenced by research initiated by Darwin in 1872, concerning the salience of the face in emotional expression and the initial source in emotion understanding (Steele et al., 1999). The Affect Task is unique as it makes the distinction between sequential emotion (recognition that a particular emotion can change over time) and mixed emotion understanding. The majority of research on children's understanding of emotion has focused on mixed or ambivalent emotions and paid little attention to the process of sequential emotion understanding (Brown & Dunn, 1996), while other studies have decided not to make a distinction between the two, instead collapsing them into one category (Steele et al., 1999)

The Affect Task comprises basic and complex line-drawn facial expressions as well as 12 cartoon sequences depicting social dilemmas (Steele, Steele, & Fonagy, 1994; Croft, 1997). Each of the 12 cartoon scenarios is drawn separately for both boys and girls, and is accompanied by a script, which is read aloud by the experimenter. The experimenter first presents a child with a single sheet of paper depicting nine line drawings of emotion faces. This is comprised of the six primary emotion faces inspired by Ekman's research (1972): happy, sad, angry, surprised, disgust, and fear; as well as

2 more complex or mixed emotion faces: mischievous (a combination of happy and angry), and surprise (the combination of happy and afraid); and one neutral face, which is drawn to not communicate any emotional information. In order to confirm the likelihood of this set of line-drawn emotion faces being identified accurately, Steele and colleagues (1994, 1999) surveyed 82 college students. They found that more than 95% of the students correctly identified all but two of these line drawings, the disgust face and the surprised face, with these latter two being correctly identified 50% of the time (Steele, 1999). After initially being asked to label the faces, the examiner then tells the child that these faces are available for use in the next activity, which involves discussing the feelings of cartoon characters, some of which do not have facial expressions.

The second phase of the Affect Task is the presentation of the 12 cartoon scenarios. The experimenter shows the sequences, one panel at a time (each on an A5-size laminated card) and, as mentioned previously, reads aloud and narrates each scenario from the accompanied script. The first cartoon sequence is used to establish familiarity with the task. In this scenario, a child is depicted with an eager smile, holding an ice cream cone, while in the next and final panel, the ice cream has fallen from the cone to the ground, and the child's face is blank of any expression – free for the respondent to designate and apply a feeling. Subsequent cartoon situations all included a child at the center of a social interaction, with a friend, sibling, parent(s), or a teacher involved in the scenes all of which culminate in some unexpected turn of events that may be assumed to evoke a strong emotional response in the characters.

After the presentation of the final cartoon panel, in which the character(s) have no facial expression, the experimenter probes the child to try and discern what the character(s) might be feeling, asking, “How do you think he/she feels now?” After the participant assigns an emotion to the character, the experimenter prompts the child to pick one of the nine facial expressions that were provided in the first phase of the administration, and apply the face to the cards via a transparency that has the facial expressions printed on it. Once the child has assigned a word and a facial expression to the character, the experimenter asks, “Why do you think he/she is feeling this way?”, thus providing the foundation for the story that each child will create for the cartoon scenarios to justify and explain their responses. The experimenter next asks the child questions pertaining to mixed emotion understanding: “Do you think he/she could be feeling anything else at the same time?” Following the child’s application of a mixed emotion word to the character, the experimenter again prompts the child to pick a facial expression and apply it using the transparency, and again asks, “Why do you think he/she is feeling this way?” Lastly, the experimenter asks questions pertaining to sequential emotion understanding, stating “He/she is feeling this way now. Do you think this feeling will change? Why?” This question implicitly probes for a view that emotions can change passively due to external circumstance or internal control. The child is again prompted to choose one of the nine facial expressions and apply it to the character(s), and the experimenter asks “What do you think happens next?” This final question provides an opportunity for the child to wrap up the story.

The Affect Task is audio-recorded and coded using a 13-item coding matrix that was developed to capture the relevant constructs corresponding to the narratives generated for each scenario. Each item on the matrix is scored on a 4-point scale where: 1 = no evidence of the construct, 2 = mild evidence of the construct, 3 = moderate evidence of the construct, 4 = marked evidence of the construct. The constructs measured are listed and explained in further detail:

1) Mother as Secure Base: This item measures the evidence in a child's story for a mother acting as a secure base for the child. Bowlby (1988) defines secure base as an attachment experience provided by caregivers:

“from which a child or an adolescent can make sorties into the outside world and to which he can return knowing for sure that he will be welcomed when he gets there, nourished physically and emotionally, comforted if distressed, reassured if frightened. In essence this role is one of being available, ready to respond when called upon to encourage and perhaps assist, but to intervene actively only when clearly necessary.”

(p. 12).

Bowlby regards this concept as crucial for understanding the development and functioning of an emotionally stable person throughout the lifespan.

2) Mother as Safe Haven: This item measures the evidence in a child's story for a mother acting as a safe haven for the child. A safe haven is defined as a form of social support, highly linked to the secure base schema. Bowlby (1988) commented that it is

“to remain within easy access of a familiar individual known to be willing and able to come to our aid in an emergency”. Additionally, Collins and Feeny (2000) saw it as a close other who provides comfort, assistance and support during crisis.

- 3) Father as Secure Base: This item measures the evidence in a child’s story for a father acting as a secure base for the child.
- 4) Father as Safe Haven: This item measures the evidence in a subject’s story for a father acting as a safe haven for the child.
- 5) Support from Peers: This item measures the evidence for the child identifying peers as providing support for the main character. Greater instances of help can be indicative of a self-view that encompasses a broader social network.
- 6) Support from Teachers: This item measures the evidence for the child identifying a teacher as providing support for the main character, and might be indicative of the child’s own experience.
- 7) Acknowledgment of Distress: This item measures evidence for the child correctly identifying distressed feelings in the scenario. Each scenario is designed to depict the main character in a situation that is upsetting or stressful; therefore it is expected that the child will identify some level of distress in the scenario.
- 8) Escalation of Conflict: This item measures the evidence for the child escalating the amount of conflict in the scenario as they elaborate on the story. This might be indicative of a disorganized or maladaptive coping style.
- 9) Coping Resourcefully: This item measures the evidence for how the child employs problem-solving strategies that depicts the main character as coping in a

resourceful manner to the conflict or distress presented in the story. Low scores indicate problematic problem-solving skills.

10) Despair/Helplessness: This item measures evidence for when the child views the main character as being in state of despair or helpless to cope with the conflict presented in the story.

11) Reflective Functioning: The item is intended to measure the amount of reflective functioning the subject is able to engage in about the characters in the scenarios. Reflective Functioning is defined as a psychological capacity intimately related to the representation of the self, which involves both a self-reflective and interpersonal component that ideally provides the individual with a well-developed capacity to distinguish inner reality from outer reality. In other words it entails the ability to mentally understand intra-personal mental and emotional processes from overt interpersonal communications while also making an accurate attempt at mentally understanding another's intra-personal mental and emotional processes (Fonagy et al., 1998). RF is anchored in careful study of how adults use, or fail to use, mental state language (beliefs and desires) when pressed to give an account of their developmental history (Steele & Steele, in Busch (2008) p. 134). It is derived from three scales pertaining to the mental processes underlining a speaker's language provided in response to the Adult Attachment Interview (Main and Goldwyn, 1993). These three scales are (a) coherence of transcript; (b) coherence of mind; and (c) metacognition (Steele & Steele, in Busch (2008) p. 138).

12) **Mixed Emotion Understanding:** This item measures evidence of the child's ability to identify mixed emotions occurring within the characters in the scenario.

Mixed emotion understanding is defined as the ability to recognize that several different emotions can be experienced at the same time. Mixed emotion can be of two types: discrete feelings or emotions that occur simultaneously, or one feeling made up of the combination of two different emotions.

13) **Sequential Emotion Understanding:** This item measures the evidence for the child's ability to identify sequential emotions occurring for the characters in each scenario. Sequential emotion understanding is defined as the ability to recognize that emotions can develop and change as time goes on.

Previous work done by this author (Schlesinger, 2012) looked at stability and change within construct measured in the Affect Task across a two-year period in a high-risk sample. The Affect Task was first administered when the children were in second or third grade, and then again when they were in fourth or fifth grade. A number of the coded categories applied to the Affect Task did not change significantly over time. Items related to representations of attachment figures tended to remain stable, which highlights the continuity of attachment relationships in middle childhood, especially when the family environment remains stable. Scores on items more indicative of affect regulation were also seen as stable over the 2-year period between administrations of the Affect Task. Parental figures are regarded as essential influences on children's affect regulation and problem solving abilities in early childhood (Cassidy, 1994). Thus, affect regulation strategies experienced with the primary

caregiver at an early age is internalized, and helps to guide later internally oriented strategies, generalized to contexts outside the parent-child relationship. Lastly, sequential emotion understanding was also seen as generally stable over both administrations of the Affect Task. Viewing emotion understanding and metacognition from a developmental perspective, it might be that sequential emotion understanding, defined as the ability to recognize that emotions can develop and change as time goes on, is internalized and expressed at an earlier age than mixed emotion understanding.

Reflective functioning and mixed emotion were scored significantly higher on the later administration of the Affect Task in this sample, suggesting that these are more sophisticated aspects of metacognition and emotion understanding, which become more fully elaborated with age as children's verbal and mental capacities are better developed. Support from peers was also scored significantly higher in the sample overall on the second administration. This can be attributed to the quest for autonomy relevant to this age group, where peers begin to take on a more significant role in a child's social world and intimacy and stability of friendships increase. In sum, stability was reflected in representations of parental figures and coping skills, while items related to mature aspects of metacognition, such as reflective functioning and mixed emotion, were more subject to change due to rapid growth in abstract reasoning in middle childhood.

This previous study also demonstrated that children who scored higher on responses related to representations of mother and father as a secure base and safe haven had a greater representational capacity for affect regulation and emotional

understanding, reflected in their responses on the Affect Task (Schlesinger, 2012). However, there were several distinctions in terms of mother versus father secure base/safe haven representations that bear mentioning. At the earlier administration, children who had internalized representations of the father character as a secure base/safe haven, had decreased evidence of escalation of conflict, as well as lower levels of despair or helplessness in relation to the central conflict. This specific finding suggests that, within this particular sample, representations that include the father figure as emotionally available and offering support and comfort when needed were linked with a more adaptive coping style at an earlier age. Steele and Steele (2001) found, using the Friends and Family Interview, which asks about the child's most and least favorite aspects of themselves, and their relationship with their mother, father, sibling(s), and best friend, that the father-child relationship linked to social conflict-resolution strategies involving siblings and peers. The Affect Task cartoons are composed of several scenarios that involve either siblings or peers, which might have similarly captured aspects of this distinct relationship.

If a securely attached infant can use their caregiver as a secure base from which to venture forth to explore the physical and social environment, it is also likely that such caregivers provide a sense of stability such that the child can also explore a range of emotions (Saarni, 1997). Children who scored higher on responses related to representations of mother as a secure base/safe haven were significantly correlated with higher scores on items related to mixed emotion across both administrations of the Affect Task over the two year period. However, there was no link between

representations of the father as a secure base/safe haven and higher scores on items measuring emotion understanding. At the second administration, children responses that reflected representations of a maternal figure as a secure base/safe haven had significantly higher scores on all items measuring emotion understanding and metacognition on the Affect Task (i.e. reflective functioning, mixed emotion, and sequential emotion understanding). This suggests that identifying and understanding ambivalent or mixed emotions is uniquely related to the mother-child relationship. These findings replicate earlier studies (Steele et al, 1999) that representations of the mother as a secure base/safe haven has a more significant role in facilitating a mature understanding of emotion in others, especially the concept of mixed emotions.

Attachment theory suggests that children form a representational model of self (in relation to others) that includes expectations of their own worthiness (Cassidy, 1988). Children are more socially competent and have more supportive social networks due to the emotional awareness and expressive skills they internalized from a secure attachment relationship in early childhood (Liable, 2007). At the later administration of the Affect Task children's representations of mother and father as a secure base/safe haven were almost equally associated with identifying peers in the cartoons on the Affect Task as more supportive. This has implications that there are qualities of early parent-child attachment that can be generalized in middle childhood to include peer groups. Future studies should also aim to address the influence that peer attachment has on the development of social understanding and emotional competence.

Behavioral outcomes related to developmental risk

Identification of risk for behavior problems has been a major focus in clinical psychology, but far less attention has been paid to the developmental processes that connect risk to difficulties (Kidwell et al., 2001). Previous studies have examined children's decreased understanding and regulation of emotion as a potential pathway from risk to behavior problems (Hall, 2011), and have tied emotional development and competence to early parent-child relationships (Cassidy, 1994; Borelli, et al. 2010; Kim and Page, 2013; Kidwell et al., 2001). Attachment theory acknowledges that children's ability for self-regulated emotions extends from the co-regulation of emotion within the context of the infant-mother relationship (Cassidy, 1994; Berlin & Cassidy, 2003; Borelli, 2010). Cassidy (1994) proposed connections between each of the three principal attachments patterns: secure, insecure-avoidant, and insecure-ambivalent, and particular emotion socialization practices. Cassidy (1994) suggested that these unconscious attachment-based strategies are rooted in the parents' own experiences.

Berlin and Cassidy (2003), through an integrative review of the original literature, suggest that mothers of secure children are sensitively responsive to both positive and negative emotion, enabling their children to express emotions in an open and direct manner. Mothers of insecure-avoidant children are proposed to socialize their children's emotions in the service of minimizing attachment behavior and emphasizing independence. Accordingly, these mothers are expected to disavow their children's negative emotions and suppress their children's expression of negative

emotion. Suppressing the display of negative affect, in turn, minimizes the child's needs for comfort and closeness. Mothers of insecure-ambivalent children are proposed to socialize their children's emotions in the service of maximizing attachment behavior and emphasizing dependence. These children are thought to display exaggerated negative affect to increase the predictability of inconsistent caregivers (Berlin & Cassidy, 2003). It can be inferred that these parenting differences leave insecurely-attached children disadvantaged in both understanding and regulating their emotions, which in turn impacts their behavioral functioning (Kidwell et al., 2010).

There has been relatively sparse data reported on emotion socialization in low-income families (Izard et al., 2008). Early studies demonstrated that emotion understanding related positively to both social and academic competence, and was influenced adversely by socioeconomic level but not by ethnicity (Izard, 1971). According to a review of the literature by Izard and colleagues (2008), most low-income children who receive adequate parental care and social support develop effective emotion regulatory skills. However, for a substantial percentage of low-income families, the stress induced by an impoverished and threatening environment provides fewer occasions for positive emotion interactions in the family, and likely fuels instances of anger, frustration, anxiety, and depressed mood (Izard et al, 2008). This in turn might increase the likelihood of harsh parenting and create less opportunity for emotional discourse, a process that promotes emotion knowledge and emotion regulation (Cutting & Dunn, 1999; Harris, 1999; Izard et al, 2008). A

disproportionately high percentage of children from low-income communities have low emotional competence and are at risk for the development of maladaptive behavior patterns (Denham et al., 2003; Izard et al, 2008).

Middle childhood is an especially challenging time in academic and personal relationships. Peer relationships become an increasingly important part of life and academic demands are greater than in earlier childhood. Consequently, lack of capability in managing emotion may lead to unsuccessful negotiation of peer relationships and academic achievement (Kim & Page, 2013). Behavior problems in middle childhood are associated longitudinally with an increased risk for a range of problems in adolescence and adulthood, including substance abuse, poor peer relations, delinquency and violence (Havighurst et al., 2013). Disruptive behavior in middle childhood is often characterized by negative emotionality, oppositional defiance, and hyperactivity. The emergence of behavior problems has been linked to poor emotional competence in children, specifically problems in understanding and regulating emotions (Trentacosta & Shaw, 2009). If children experience heightened levels of emotional intensity, poor regulation contributes to both a greater probability of rejection and to increased aggression (Eisenberg et al., 1997). Children with behavior problems often have more difficulty taking another's emotional perspective and more likely to interpret others' emotions as angry and hostile (Havighurst et al., 2013).

The premise that emotion regulation skill moderates the relation between exposure to risk and child behavior problems is based on the evidence that the capacity

to regulate negative emotion reduces the chances that a child will be emotionally overwhelmed by stress and unable to cope effectively (Eisenberg et al., 1997). The ability to regulate the negative emotions that accompany stressful life circumstances can serve to protect a child at risk for development of negative outcomes, such as behavior problems. These critical skills must be taught elsewhere if children have not learned them within the context of their early attachment relationships.

The effect of afterschool programs on high-risk populations

Over the past two decades, support for afterschool programs targeting low- and moderate-income children has significantly increased (Halpern, 2002). This stems, in part, from research indicating that the hours following release from school (typically between 2 and 6 pm) constitute a high-risk period of the day for children and adolescents (Posner & Vandell, 1999). Adult supervision in the hours following release from school may counteract the negative influence of deviant peer groups on young people's behavior, and decrease substance use and other antisocial behavior (Posner & Vandell, 1994; Bender et al., 2011). Afterschool programs, therefore, offer an important milieu for providing structured interventions in supervised and supportive environments to children and youth lacking parental supervision.

According to Halpern (2002), the intensified focus on afterschool programs in low-income communities has to do with distinct elements emerging specifically for these children. Urban classrooms are being turned into test preparation centers and too many children are slipping through the cracks, failing to consolidate basic literary

skills, developing negative perceptions of themselves as students, and becoming psychologically detached from school as an institution (Halpern, 2002). Poverty affects children directly because it limits the material resources available to them and indirectly because of the psychological distress it engenders in parents, which in turn influences parental behavior (Posner & Vandell, 1994). The majority of parents continue to do what they can to protect their children and provide a secure base for them at home; however, some, preoccupied with family survival or with their own unmet needs, do not have the capacity to focus on their children's daily lives, monitor their well-being, seek out external resources, or provide other important supports, such as help with homework (Halpern, 2002). Following home and school, afterschool programs are setting up to be a third critical developmental setting for low- and moderate-income children.

Afterschool programs have multiple goals, including: improving outcomes in academic performance, promoting positive development, and preventing delinquency, substance use, and other problem behaviors. While diverse in their components, afterschool programs typically provide some combination of academic support, recreation, mentoring, health promotion, and social and emotional skill training. Many programs aim to increase positive social bonds with pro-social peers, parents, other adults, and program staff. Often, afterschool programs offered in low-income neighborhoods enable at-risk children access to educational and recreational opportunities that are otherwise unavailable (Posner & Vandell, 1994; Halpern, 2002; Bender et al, 2011).

Participation in afterschool programs is associated with a variety of positive outcomes, such as a significant reduction in delinquency and aggressive behavior (Durlak & Weissberg, 2007), significant decreases in self-reported substance abuse, improved drug refusal skills, and increased pro-social attitudes toward drug use (LoSciuto et al. 1999). Researchers have also demonstrated that children who attend afterschool programs demonstrate better rates of school attendance and participation is associated with improvements in academic performance (Shernoff, 2010). Children in these programs indicate that they frequently receive greater emotional and developmental support in afterschool settings than they do in traditional school settings (Bender et al., 2011). Numerous studies have demonstrated that participating in structured afterschool activities is linked to better psychosocial adjustment and social skills, improved social competence, and enhanced relations between peers and adults (Posner & Vandell, 2004; Englund, 2008; Shernoff, 2010). Improvements in physical health and obesity are also associated with attendance in afterschool programs (Mahoney et al. 2005). Finally, positive improvements in race relations and ethnic identity are associated with afterschool program participation (LoSciuto et al. 1999).

I Have A Dream Foundation

Every year, more than 1.2 million students drop out of U.S. schools (Rhodes, et al., 2008). Students coming from an ethnic minority and lower socioeconomic status are at greater risk for dropping out of high school. The event dropout rate in New York City in 2014 was 9.6 percent for Blacks and 12.7 percent for Hispanics, compared to

6.1 percent for Whites (New York State Education Department, 2015). In 2009, the event dropout rate of students living in low-income families was about five times greater than the rate of their peers from high-income families (7.4 percent vs. 1.4 percent) (US Department of Education, 2012).

Success or failure in school has serious individual and social consequences (Carlson et al., 1999). Economic and educational consequences of school failure, such as high unemployment rates, lost income, and increased need for social services, have been well documented (U.S. Bureau of the Census, 1991). Risk for early school dropout is nested across individual, social, and ecological levels (Mahoney, 2014). Prior research has established multiple antecedent correlates of school failure in adolescence; including factors related to poor academic performance, behavior problems, emotional issues, neglectful parenting styles or lack of family support, difficulties in social relationships, and low socioeconomic status (Carlson et al., 1999). Afterschool programs can be designed to reorganize these patterns in the form of increased student engagement in and motivation for school (Mahoney, 2014); however, disadvantaged students still face many barriers to college entry and completion (Rhodes et al., 2008).

Rhodes, Noonan, and Rosqueta (2008) note that for low-income students the financial means to attend college are of major concern. The College Board's analysis of the costs associated with college attendance (including tuition, fees, room and board) found that full time attendance by low-income students at public 4-year universities, net of financial aid, required 39% of their families income in 2003-4.

Arguably more devastating, however, are the gaps in preparation for secondary education that have developed over disadvantaged students' lifetimes. Aggregate issues related to poor health, limited social resources, poor quality of schooling, and overall low expectations, derail these individuals from a path leading to a college degree (Rhodes et al, 2008, p. 53)

The "I Have A Dream" (IHAD) programs across the country work with low-income, high-risk students who typically have been recruited into the program in the early elementary school grades. The IHAD model provides to its students, who it calls 'Dreamers', a long-term commitment of mentoring, tutoring, and rich cultural and social experiences, works with them from elementary school through high school graduation, and guarantees tuition assistance for those who continue to higher education. IHAD aims to help their 'Dreamers' succeed in their schooling, lead productive lives, and break the cycle of poverty. The IHAD organization works closely with school and community leaders to identify school or housing developments where they will have the greatest impact. Most children involved in the IHAD afterschool program are members of historically underserved racial and ethnic groups, and they are generally the first in their family to attend college (www.ihaveadreamfoundation.org).

The IHAD model comprises two critical components. First, it guarantees 'last dollar' tuition assistance, to make college a realistic option. 'Last dollar' refers to the gap between existing sources of funding, including scholarships and financial aid, and the total financing that attendance requires. Second, the model offers long-term and

comprehensive supports (e.g. academic, health, social, legal) that students need to progress toward the goal of high school graduation and college readiness. Key to the model's success is its coordinator, typically an educator or social worker, who responds to students' needs by securing resources such as tutors or family counselors. While the actual services provided depend entirely on the sponsored class, they usually include extensive mentoring relationships, tutoring, afterschool and summer enrichment programs, college tours, and assistance with college applications and college assimilation (Rhodes et al, 2008, p. 53).

Development of the current study

The current study grows out of the current gaps in the literature regarding how an integrative reflective understanding of emotion, self and others might evolve in middle childhood, as well as the methodological interests in further validating the Affect Task (Steele et al, 1999; Steele et al, 2002). Attachment theory posits that early childhood relationships affect children's emotional functioning at all levels, and individual differences in attachment patterns can influence the development of emotional competence from infancy to adulthood (reviewed in Cassidy and Shaver, 2008). The relationship between attachment and emotional development becomes significantly more complex and nuanced as children enter middle childhood, when the attachment system itself undergoes a remarkable reorganization. Not only is middle childhood regarded as the period in which early, relationship-specific internal models are integrated into generalized representations, but this is also when peers and adults

outside the family circle begin to serve a significant role in the attachment system. It stands to reason that a comprehensive assessment of emotion understanding would also address representations of attachment figures, including peers and teachers.

This dissertation is designed to extend the literature linking representations of parental secure base/safe haven behaviors and emotion understanding in middle childhood with teacher reports of emotional and behavior problems over the elementary and middle school years. Children's representations of parental secure base/ safe haven behaviors, affect-regulation, and emotional understanding in middle childhood will be investigated by exploring responses to the Affect Task, a series of 12 cartoon scenarios depicting emotionally ambivalent social interactions (Steele et al., 1994). Emotional and behavior problems will be assessed using the Strengths and Difficulty Questionnaire (SDQ), a teacher-report of observed social, emotional, and behavior functioning. Comparing Affect Task response at two time periods, 7- and 9-years, with concurrent and later teacher reports of strengths and difficulties will provide a robust test of the concurrent and predictive validity of the Affect Task

Questions still exist as to which methodological procedure would best capture the wide range of skills embodied in the expression and understanding of emotion in middle childhood. With respect to methodology, reliance on an observational method of measuring attachment and emotion understanding does not sufficiently reflect the complexity of a child this age. The Affect Task assumes that children in middle childhood will express and recognize emotion in the characters depicted in the task scenarios in a way that reflects the emotional relationships they have in real life with

their parents, peers, and teachers (Croft, 1997). However, to add to the validity of this measure, scores should correlate with an observational element, such as teacher reports of behavior and emotional functioning.

This study was designed using a longitudinal perspective. The children in the sample were drawn from a larger sample attending an afterschool program, and were assessed over the course of seven years. This dissertation is aimed at addressing several questions. Principally, is the Affect Task a valid measure of emotion understanding? I will specifically look at how representations of parental secure base/safe haven behaviors and emotion understanding collected directly from the children is correlated with concurrent independent measures of mental health (SDQ). The Affect Task was administered first when the children were in second or third grade (Time 1), and then again one year later (Time 2). The SDQ was completed by coaches in the afterschool program at Time 1 and 2 of the Affect Task, and then again 1 year later (Time 3), and finally when the children were in eighth or ninth grade (Time 4). I hypothesize that children who scored high on constructs of the Affect Task that measure ‘felt security’ and emotion understanding will have lower scores on SDQ subscales comprising the Total Difficulties score, looked at concurrently and predictively over time.

Lastly, despite the proliferation of research assessing children’s emotion understanding over the past two decades, most studies have focused on White children with a middle-class upbringing, with far fewer studies conducted examining the development of emotion understanding in children from more diverse backgrounds.

Stress associated with poverty, community violence, and family discord can contribute to children's relatively poor emotion knowledge and emotion regulation and increases the risk of developing maladaptive behavior patterns. The sample used in this dissertation was drawn from an afterschool program called 'I Have a Dream' (IHAD) in New York City, which serves children living in low-income communities. This dissertation will provide more evidence that interventions that create more opportunity for positive emotional experiences and reliable adult role models may meet a critical need in low-income communities. I hypothesize that there will be a decrease in the overall amount of children identified as having clinically significant behavior problems from the first administration of the SDQ to the last administration in accord with the positive effects of the afterschool program (IHAD).

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Part II: Empirical Article

Abstract

One of the primary functions of the attachment behavioral system is to regulate emotional experience under conditions of threat. Although research supports this association among infants and adults, few studies examine the relation between emotion and attachment in middle childhood. The present study sought to provide further evidence for the predictive and concurrent validity of the Affect Task, a cartoon-based measure depicting socially ambivalent scenarios that prompts for representations of attachment figures, affect regulation and coping strategies, and the consideration of the possibility of mixed or sequentially distinct emotions. Twenty children participating in an afterschool program called 'I Have a Dream' (IHAD) were followed from elementary school to late middle school. The Affect Task was administered at Time 1 (age 7) and Time 2 (age 9); while the Strengths and Difficulties Questionnaire, an observer-based measure of emotional and behavioral function was completed by counselors at Times 1 (age 7), 2 (age 9), 3 (age 11), and 4 (age 13). Overall, children who had higher levels of felt security and emotion understanding as indicated by Affect Task responses had significantly lower levels of observed emotional and behavior problems both concurrently and predictively at Time 2 and Time 3, but not Time 4. There were decreased total difficulties observed over time with continued participation in the IHAD program. This study highlights the importance of afterschool programs in high-risk communities, as interventions aimed at providing positive social and academic support.

Keywords: emotion understanding, attachment, middle childhood, afterschool programs, high-risk children

Introduction

Scholars have only recently recognized the importance of middle childhood (from 6 to 11 years of age) in relation to overall development. In contrast to traditional portrayals of middle childhood as a period of psychological latency, contemporary studies have shown that remarkable advances in conceptual skills and social competence take place during this time period (Raikes & Thompson, 2005), which establish their identity (Eccles, 1999) and influence levels of peer-acceptance, self-esteem, and other developmental outcomes (Gifford-Smith & Browell, 2003; Saarni, 1999; cited in Katz-Gold & Priel, 2009). Alongside their increasing ability for self-awareness and reflection, children also develop a more salient and conscious ability to take the perspective of others (Saarni, 1999). Children begin to have sustained encounters outside of their families and to navigate their own way through societal structures (Katz-Gold & Priel, 2009; Coll & Szalacha, 2004). Social relationships and roles change dramatically as children enter school, join programs, and become involved with peers and adults outside their families. Yet, despite this rich transformation across many aspects of development, middle childhood remains an understudied period in the lifespan (reviewed in Kerns & Richardson, 2005).

Kerns and Richardson (2005) note the importance of this developmental time period, as many of the problems that emerge in adolescence (e.g. school dropout,

delinquency, drug use, etc.) have its antecedents in middle childhood, making this a critical time for preventative interventions. In the present study, emphasis will be made that exploring the field of emotion understanding and attachment representations in middle childhood, especially in at-risk populations, is crucial for the implementation of interventions designed to enrich adjustment, behavior, and mental health outcomes.

The interplay between emotion understanding and attachment representations of middle childhood

Middle childhood is an especially challenging time in academic and personal relationships. Peer relationships become an increasingly important part of life and academic demands are greater than in earlier childhood. Consequently, lack of capability in managing emotion may lead to unsuccessful negotiation of peer relationships and academic achievement (Kim & Page, 2013). Behavior problems in middle childhood are associated longitudinally with an increased risk for a range of problems in adolescence and adulthood, including substance abuse, poor peer relations, delinquency and violence (Havighurst et al., 2013). Disruptive behavior in middle childhood is often characterized by negative emotionality, oppositional defiance, and hyperactivity. The emergence of behavior problems has been linked to poor emotional competence in children, specifically problems in understanding and regulating emotions (Trentacosta & Shaw, 2009). If children experience heightened levels of emotional intensity, poor regulation contributes to both a greater probability of rejection and to increased aggression (Eisenberg et al., 1997). Children with

behavior problems often have more difficulty taking another's emotional perspective and more likely to interpret others' emotions as angry and hostile (Havighurst et al., 2013). The premise that emotion regulation skill moderates the relation between exposure to risk and child behavior problems is based on the evidence that the capacity to regulate negative emotion reduces the chances that a child will be emotionally overwhelmed by stress and unable to cope effectively (Eisenberg et al., 1997). The ability to regulate the negative emotions that accompany stressful life circumstances can serve to protect a child at risk for development of negative outcomes, such as behavior problems.

Identification of risk for behavior problems has been a major focus in clinical psychology, but far less attention has been paid to the developmental processes that connect risk to difficulties (Kidwell et al., 2010). Previous studies have examined children's decreased understanding and regulation of emotion as a potential pathway from risk to behavior problems (Kidwell et al., 2010) and have tied emotional development and competence to early parent-child relationships (Cassidy, 1994; Moss et al., 2006; Borelli, et al. 2010; Kim & Page, 2013; Kidwell et al., 2010). The underlying premise of attachment theory is that early experiences with the emotional availability of primary caregivers in their lives shape their feelings of felt security and trust in others (Bowlby, 1980/82; Bretherton, 1985; Harris, 1994; Steele et al., 1999; Easterbrook & Abeles, 2000; Pons et al., 2004). The quality of caregiving differs widely, and these variations in caregiver behavior lead to the development of individual differences in patterns of attachment children show to their mothers and

fathers. These patterns fall on a continuum that can be categorized as very adaptive and beneficial, to possibly harmful to the child (Crowell, 2003), and serve to regulate the physiology and behavior of the infant (Boris et al., 2000) with long term implications for personality development (Sroufe, 2005).

Through continual and repeated interactions with their primary caregivers (attachment figures), infants form mental representations of the self and others, and develop expectations about interpersonal relationships and social interactions (Bowlby 1969/1982; 1973). These expectations, or ‘internal working models’, are believed to organize the regulation of affect, and subsequently appraise and guide behavior in new situations (Bowlby, 1973; Bretherton, 1985; Bretherton, 1992). Early attachment relationships offer children the means to simultaneously attend to and use information related to internal states to interpret behavior of others (Steele et al., 1999). Mother-child discourse about emotions is also vital in understanding the influence of attachment security on children’s emotional understanding (Harris, 1999; Ontai & Thompson, 2008; Mcquaid et al., 2007). Secure attachment relationships are characterized by open communication, where parents validate and acknowledge children’s displays of both positive and negative emotions, facilitating children’s thinking about mental states that underlie emotional behavior (Fonagy et al., 1991a; Laible and Thompson, 1998), and enabling children to readily understand and regulate their emotions (Cassidy, 1994).

As we progress from infancy to adulthood, the emotional experiences and demands of the social world become increasingly complex; therefore, a sophisticated

understanding of emotion is critical. Emotion understanding is closely tied to social competence, emotion regulation, empathy, prosocial behavior, and mental health.

Emotion understanding refers to the conscious knowledge about emotion processes (Southam-Gerow & Kendall, 2002), including the ability to recognize and label one's own and others' emotions, relate them to situations, understand their causes, identify familial and cultural display rules, and recognize disparity between emotional displays and felt emotion (Denham, 1986; Denham, 1998; Blankson et al., 2013). Knowledge about emotions allows children to communicate their own emotional experiences effectively and respond appropriately to the emotional signals of others, thereby enhancing social competence (Denham et al., 2003; Leerks, et al., 2008).

Assessing attachment and emotion understanding in middle childhood

Sufficient methods for assessing attachment and emotion understanding in middle childhood are limited, with techniques ranging from behavioral observations, to picture responses and doll play, to interviews and rating scales. Crittenden and colleagues (2010) suggest that the lack of consensus around the existing assessments reflect several issues. Firstly, there is confusion regarding what exactly is being assessed. The gold standard for assessing attachment in infancy (the unique affective to bond to a specific caregiver) is the Strange Situation Procedure (Ainsworth, Blehar, Waters, & Wall, 1978) while the Adult Attachment Interview assesses adult state of mind with regard to attachment (George, Kaplan, & Main, 1985). However, attachment in middle childhood needs a more explicit and developmentally appropriate

definition (Mayseless, 2005). Existing assessments “may emphasize characteristics of younger children or assume those of adolescents and adults” (Crittenden, 1995, p. 186). The conceptualization of attachment used in existing assessments tends to uphold the constructs developed to assess attachment patterns in infants (i.e. the ABCD model; secure, insecure-avoidant, insecure-resistant, disorganized). In middle childhood, attachment security may not be easily identified by means of behavioral measures (e.g. separation and reunion) because the intensity and frequency of attachment behaviors decline (Bowlby, 1973; Main & Cassidy, 1998).

Secondly, attachment measures in middle childhood should encompass the broadening social world of the child, their burgeoning social competency and emotion understanding, as well as tap into their coping skills. The paucity of research on attachment and emotional development is somewhat surprising, given the central role of emotion in attachment (Kerns, 2008). Attachment theory posits that early childhood relationships affect children’s emotional functioning at all levels, and individual differences in attachment patterns can influence the development of emotional competence from infancy to adulthood (reviewed in Cassidy & Shaver, 2008). The relationship between attachment and emotional development becomes significantly more complex and nuanced as children enter middle childhood, when the attachment system itself undergoes a remarkable reorganization. Not only is middle childhood regarded as the period in which early, relationship-specific internal models are integrated into generalized representations, but this is also when peers and adults outside the family circle begin to serve a significant role in the attachment system.

To date, the empirical research on emotion understanding has focused primarily on younger children. Studies with infants, toddlers, and preschoolers dominate the literature and there is significantly less attention paid to middle childhood as a developmental period. The lack of research on emotion in middle childhood is due, in part, to a paucity of empirically validated assessment methods for older children (Erklin, 2011). To demonstrate validity, measures of attachment and emotion understanding used in middle childhood need to correlate with independent measures of mental health, in order to identify children in need of clinical intervention. These measures also must be able to capture the attention of school-age children, and appropriately engage them.

Questions still exist as to which assessment would best operationalize the wide range of skills embodied in the expression and understanding of emotion in middle childhood. With respect to methodology, reliance on an observational method of measuring attachment and emotion understanding does not sufficiently reflect the complexity of a child this age. An argument is made here, that a focus on the child's understanding of emotion using a performance-based measure driven by attachment theory offers much promise, especially as possibly distinct representations or thoughts about mother and father can be considered in relation to children's rapidly developing thoughts and feelings about social dilemmas.

Developing and validating the affect task

Research has demonstrated that throughout the school years, children gradually

develop an understanding of how people's emotions, beliefs, and actions are interrelated (Harris, 1989; Tenenbaum et al., 2008). Children's ability to understand the emotional experience of themselves and others contributes to their self-awareness, emotional regulation, social competence and ability to form positive peer relationships (Denham et al., 2003), and predicts academic performance (Izard et al., 2001). Given the importance of children's emotion knowledge and understanding to future social and academic outcomes, it seems pertinent to create and validate a measure that would identify early deficits in order to implement interventions when needed. Pons, Harris, and de Rosnay (2004) suggest that an assessment procedure should not only provide a standardized way to identify a child's general level of emotion understanding, but such an instrument should "also allow children's understanding of emotion to be systematically introduced as either an explanatory variable or as a variable to be explained both in clinical and developmental psychology" – e.g. in the context of attachment, theory of mind, metacognition, individual differences, and social behaviors and representations (p. 149).

Brown and Dunn (1996) cite that one of the hallmarks of emotion understanding in middle childhood is the appreciation of mixed or ambivalent emotions. They note that while a number of studies have been devoted to delineating a normative progression in the development of mixed emotions, very few have looked at the extent of variability in this developmental construct. Although it had been previously argued that the child's progression through the age-related stages in the expression and understanding of emotion were solely dependent on advances in

language and cognition, Brown and Dunn (1996) suggest that individual differences in these abilities were related to the family context in which the child develops. Steele et al. (1999) support and extend these earlier findings, by demonstrating that a six-year old has an increased capacity to identify mixed or ambivalent emotions if they have had the benefit of a secure attachment to their mother at one-year of age, independent of language skills. This suggests the value of focusing on socioemotional rather than cognitive determinants of emotion understanding.

The Affect Task was an attempt to develop a measure of emotion understanding in children using an attachment framework, and assess a child's ability to correctly identify and resourcefully discuss facial expressions. The measure was first developed as an interview technique in a longitudinal research study (Steele, Steele, Croft & Fonagy, 1999), and has been used in subsequent attachment related studies (Steel, Steele & Johansson, 2002; Steele & Steele, 2005). Its' development was strongly influenced by research initiated by Darwin in 1872, concerning the salience of the face in emotional expression and the initial source in emotion understanding (Steele et al., 1999). The Affect Task is unique as it makes the distinction between sequential emotion (recognition that a particular emotion can change over time) and mixed emotion understanding. The majority of research on children's understanding of emotion has focused on mixed or ambivalent emotions and paid little attention to the process of sequential emotion understanding (Brown and Dunn, 1996), while other studies have decided not to make a distinction between the two, instead collapsing them into one category (Steele et al., 1999). The Affect Task assumes that children in

middle childhood will express and recognize emotion in the characters depicted in the task scenarios in a way that reflects the emotional relationships they have in real life with their parents, peers, and teachers (Croft, 1997). However, to add to the validity of this measure, scores should correlate with an observational element, such as teacher reports of behavior and emotional functioning.

As such, studies examining emotional development and competence must be embedded within the framework of attachment theory, and these critical skills must be taught elsewhere if children have not learned them within the context of their early attachment relationships. Difficulties with the regulation of emotion in children may persist when family support is limited (Dodge et al., 1985). After-school programs, with a concentrated focus on support, both with homework and social relationships, can have positive effects on children's emotion regulation skills and emotion understanding (Hammond et al., 2009)

The effect of afterschool programs on high-risk populations

Over the past two decades, support for afterschool programs targeting low- and moderate-income children has significantly increased (Halpern, 2002). According to Halpern (2002), the intensified focus on afterschool programs in low-income communities has to do with distinct elements emerging specifically for these children. Urban classrooms are being turned into test preparation centers and too many children are slipping through the cracks, failing to consolidate basic literary skills, developing negative perceptions of themselves as students, and becoming psychologically

detached from school as an institution (Halpern, 2002). Poverty affects children directly because it limits the material resources available to them and indirectly because of the psychological distress it engenders in parents, which in turn influences parental behavior (Posner and Vandell, 1994). The majority of parents continue to do what they can to protect their children and provide a secure base for them at home; however, some, preoccupied with family survival or with their own unmet needs, do not have the capacity to focus on their children's daily lives, monitor their well-being, seek out external resources, or provide other important supports, such as help with homework (Halpern, 2002). Afterschool programs, therefore, offer an important milieu for providing structured interventions in supervised and supportive environments to children and youth lacking parental supervision.

Afterschool programs have multiple goals, including: improving outcomes in academic performance, promoting positive development, and preventing delinquency, substance use, and other problem behaviors. While diverse in their components, afterschool programs typically provide some combination of academic support, recreation, mentoring, health promotion, and social and emotional skill training. Many programs aim to increase positive social bonds with pro-social peers, parents, other adults, and program staff. Often, afterschool programs offered in low-income neighborhoods enable at-risk children access to educational and recreational opportunities that are otherwise unavailable (Posner and Vandell, 1994; Halpern, 2002; Bender et al, 2011).

Participation in afterschool programs is associated with a variety of positive outcomes, such as a significant reduction in delinquency and aggressive behavior (Durlak and Weissberg, 2007), significant decreases in self-reported substance abuse, improved drug refusal skills, and increased pro-social attitudes toward drug use (LoSciuto et al. 1999). Researchers have also demonstrated that children who attend afterschool programs demonstrate better rates of school attendance and participation is associated with improvements in academic performance (Shernoff, 2010). Children in these programs indicate that they frequently receive greater emotional and developmental support in afterschool settings than they do in traditional school settings (Bender et al., 2011). Numerous studies have demonstrated that participating in structured afterschool activities is linked to better psychosocial adjustment and social skills, improved social competence, and enhanced relations between peers and adults (Posner and Vandell, 2004; Englund, 2008; Shernoff, 2010). Improvements in physical health and obesity are also associated with attendance in afterschool programs (Mahoney et al. 2005). Finally, positive improvements in race relations and ethnic identity are associated with afterschool program participation (LoSciuto et al. 1999).

Current investigation

In summary, a review of the literature suggests that middle childhood is overall a vastly under-researched stage in development, and there is a lack of reliable and valid assessments of emotion understanding and attachment for this age group. This study was designed to extend the current literature linking representations of parental secure

base/safe haven behaviors and emotion understanding in middle childhood with teacher reports of emotional and behavior problems over the elementary and middle school years. To achieve this aim, children's representations of parental secure base/safe haven behaviors, affect-regulation, and emotional understanding in middle childhood was investigated by exploring responses to the Affect Task, a series of 12 cartoon scenarios depicting emotionally ambivalent social interactions (Steele et al., 1994). Emotional and behavior problems was assessed using the Strengths and Difficulty Questionnaire (SDQ), a teacher-report of observed social, emotional, and behavior functioning. In this present study, a research partner was found in the I Have a Dream Foundation New York City and their Chelsea program. The I Have a Dream program, explained in more detail below, is effective at fostering academic achievement in at-risk youth. The program is designed to enhance not only academic performance, but also social skills, and provide 'Dreamers' with new experiences.

This study aimed to explore the possible stability or change in Affect Task scores over time, noting the developmental growth in social cognition for middle childhood. Secondly, it was speculated that children who scored higher on responses related to representations of mother and father as a secure base and safe haven would also have a greater representational capacity for affect regulation and emotional understanding reflected in their Affect Task responses at Time 1 and Time 2.

Furthermore, this study attempted to demonstrate that the Affect Task is a valid measure of emotion understanding in middle childhood, by correlating it an independent measure of mental health, the Strengths and Difficulties questionnaire. It

was expected that children who evidenced more developed emotion understanding skills would demonstrate less emotional and behavioral difficulties as reported by their counselors in the afterschool program. Specifically, it was hypothesized that children who scored high on constructs of the Affect Task that measure ‘felt security’ and ‘emotion understanding’ would have lower scores on SDQ subscales comprising the Total Difficulties score, looked at concurrently and predictively over time.

Lastly, this study aimed to provide more evidence regarding the importance of afterschool programs as interventions that create opportunity for positive emotional experiences and reliable adult role models in low-income communities. The sample used in this dissertation was drawn from an afterschool program called ‘I Have a Dream’ (IHAD) in New York City, which serves children living in low-income communities. Despite the proliferation of research assessing children’s emotion understanding over the past two decades, most studies have focused on White children with a middle-class upbringing, with far fewer studies conducted examining the development of emotion understanding in children from more diverse backgrounds. Stress associated with poverty, community violence, and family discord can contribute to children’s relatively poor emotion knowledge and emotion regulation and increases the risk of developing maladaptive behavior patterns. It was hypothesized that there would be a decrease in the Total Difficulties score from the first administration of the SDQ to the last administration in accordance with the positive effects of the afterschool program (IHAD).

Methods

Participants

The children that participated in the current study were a subsample from a larger sample of children participating in an afterschool program in New York City called ‘I Have a Dream’ (IHAD), one of 80 national programs. The IHAD program works with low-income, high-risk students who typically have been recruited into the program in the early elementary school grades. The IHAD model provides to its students, who it calls ‘Dreamers’, a long-term commitment of mentoring, tutoring, and rich cultural and social experiences, works with them from elementary school through high school graduation, and guarantees tuition assistance for those who continue to higher education. IHAD aims to help their ‘Dreamers’ succeed in their schooling, lead productive lives, and break the cycle of poverty. The IHAD organization works closely with school and community leaders to identify school or housing developments where they will have the greatest impact. Most children involved in the IHAD afterschool program are members of historically underserved racial and ethnic groups, and they are generally the first in their family to attend college

(www.ihaveadreamfoundation.org).

The IHAD model comprises two critical components. First, it guarantees ‘last dollar’ tuition assistance, to make college a realistic option. ‘Last dollar’ refers to the gap between existing sources of funding, including scholarships and financial aid, and the total financing that attendance requires. Second, the model offers long-term and comprehensive supports (e.g. academic, health, social, legal) that students need to

progress toward the goal of high school graduation and college readiness. Key to the model's success is its coordinator, typically an educator or social worker, who responds to students' needs by securing resources such as tutors or family counselors. While the actual services provided depend entirely on the sponsored class, they usually include extensive mentoring relationships, tutoring, afterschool and summer enrichment programs, college tours, and assistance with college applications and college assimilation.

The Affect Task and Strengths and Difficulty Questionnaire (SDQ) was originally administered to thirty-three children in second and third grade, by a team of graduate students from the Center for Attachment Research based at the New School for Social Research. Out of this original sample, twenty-eight of the children were followed up with the Affect Task and SDQ in fourth and fifth grade, twenty-six were followed up using the SDQ in sixth or seventh grade and finally, the SDQ was provided for twenty of the original participants when they were in eighth and ninth grade. During the first phase of data collection 57.6% of the children were in second grade, and 42.4% were in third grade. The students were between the ages of seven and nine at the start of the study, $M = 8.38$, $SD = .68$, range = 7.10-9.60. At this time, family composition was also assessed; 58% ($n = 19$) of children were living in 2-parent households, 39% ($n = 13$) were living with mother, and 3% ($n = 1$) were living with primarily with the father. Detailed information about the student's demographic characteristics is presented in Table 1.

INSERT TABLE 1 ABOUT HERE

The majority of the participants identified as members of a racial minority (i.e. African-American (n=8), Hispanic (n=14), and Asian (n=11), and all came from below average socioeconomic households, living in public housing (a requirement for participation in the IHAD program). All of the participants were fluent in the English language.

Measures

The Affect Task. The Affect Task is a series of 12 cartoon scenarios depicting emotionally ambivalent social interactions. The cartoon scenarios include a child in the center of a social interaction, often including a peer, parent(s), sibling, or teacher. Each scenario was drawn separately for gender; therefore there is a discrete set of cards for boys and girls. Every panel of each scenario is accompanied by a script, which is read aloud by the experimenter (Refer to Appendix A for Affect Task Protocol). In the final panel of each scenario, the characters are drawn without any facial expression. The experimenter asks a series of questions that probe the child for a narrative explaining what the character(s) might be feeling, inviting consideration of whether more than one feeling might be relevant for each character, and whether a character's feeling might change later on; thus inviting the child to consider the possibility of mixed or sequentially distinct emotions (Steele, et al, 1999; Steele & Steele, 2005).

The experimenter first presents the child with a sheet of paper depicting nine different emotional faces and asked the child to label each face. The Affect Task uses six primary emotion faces: happy, sad, afraid, disappointed, and disgust; two mixed

emotion faces, which are a blend of two primary emotion faces: mischievous (a combination of happy and angry), and surprise (the combination of happy and afraid); and one neutral face, which is drawn to not communicate any emotional information (Refer to Appendix B for Face Sheet). After initially being asked to label the faces, the child then is told that the faces are available to use in the next activity.

The second phase of the Affect Task is the presentation of the 12 cartoon scenarios, where, as mentioned previously, the experimenter reads aloud and narrates each scenario from the accompanied script. After the presentation of the final cartoon panel, in which the character(s) have no facial expression, the experimenter probes the child to try and discern what the character(s) might be feeling, asking, “How do you think he/she feels now?” After the participant assigns an emotion to the character, the experimenter prompts the child to pick one of the nine facial expressions that were provided in the first phase of the administration, and apply the face to the cards via a transparency that has the facial expressions printed on it. Once the child has assigned a word and a facial expression to the character, the experimenter asks, “Why do you think he/she is feeling this way?”, thus providing the foundation for the story that each child will create for the cartoon scenarios to justify and explain their responses. The experimenter next asks the child questions pertaining to mixed emotion understanding: “Do you think he/she could be feeling anything else at the same time?” Following the child’s application of a mixed emotion word to the character, the experimenter again prompts the child to pick a facial expression and apply it using the transparency, and again asks, “Why do you think he/she is feeling this way?” Lastly, the experimenter

asks questions pertaining to sequential emotion understanding, stating “He/she is feeling this way now. Do you think this feeling will change? Why?” This question implicitly probes for a view that emotions can change passively due to external circumstance or internal control. The child is again prompted to choose one of the nine facial expressions and apply it to the character(s), and the experimenter asks “What do you think happens next?” This final question provides an opportunity for the child to wrap up the story

After data was collected, the Affect Task audio-recording was listened to and coded by a member of the project team using an 13-item coding matrix that was developed to capture the relevant constructs corresponding to the narratives generated for each scenario (refer to Appendix C for complete coding matrix). Each item on the matrix was scored on a 4-point scale where: 1 = no evidence of the construct, 2 = mild evidence of the construct, 3 = moderate evidence of the construct, 4 = marked evidence of the construct. The constructs measured are listed and explained in further detail:

1) Mother as Secure Base: This item measures the evidence in a child’s story for a mother acting as a secure base for the child. Bowlby (1988) defines secure base as an attachment experience provided by caregivers:

“from which a child or an adolescent can make sorties into the outside world and to which he can return knowing for sure that he will be welcomed when he gets there, nourished physically and emotionally, comforted if distressed, reassured if frightened. In essence this role is one of being available, ready to respond when called upon to encourage

and perhaps assist, but to intervene actively only when clearly necessary."

(p. 12).

Bowlby regards this concept as crucial for understanding the development and functioning of an emotionally stable person throughout the lifespan.

- 2) Mother as Safe Haven: This item measures the evidence in a child's story for a mother acting as a safe haven for the child. A safe haven is defined as a form of social support, highly linked to the secure base schema. Bowlby (1988) commented that it is "to remain within easy access of a familiar individual known to be willing and able to come to our aid in an emergency". Additionally, Collins and Feeny (2000) saw it as a close other who provides comfort, assistance and support during crisis.
- 3) Father as Secure Base: This item measures the evidence in a child's story for a father acting as a secure base for the child.
- 4) Father as Safe Haven: This item measures the evidence in a subject's story for a father acting as a safe haven for the child.
- 5) Support from Peers: This item measures the evidence for the child identifying peers as providing support for the main character. Greater instances of help can be indicative of a self-view that encompasses a broader social network.
- 6) Support from Teachers: This item measures the evidence for the child identifying a teacher as providing support for the main character, and might be indicative of the child's own experience.

- 7) Acknowledgment of Distress: This item measures evidence for the child correctly identifying distressed feelings in the scenario. Each scenario is designed to depict the main character in a situation that is upsetting or stressful; therefore it is expected that the child will identify some level of distress in the scenario.
- 8) Escalation of Conflict: This item measures the evidence for the child escalating the amount of conflict in the scenario as they elaborate on the story. This might be indicative of a disorganized or maladaptive coping style.
- 9) Coping Resourcefully: This item measures the evidence for how the child employs problem-solving strategies that depicts the main character as coping in a resourceful manner to the conflict or distress presented in the story. Low scores indicate problematic problem-solving skills.
- 10) Despair/Helplessness: This item measures evidence for when the child views the main character as being in state of despair or helpless to cope with the conflict presented in the story.
- 11) Reflective Functioning: The item is intended to measure the amount of reflective functioning the subject is able to engage in about the characters in the scenarios. Reflective Functioning is defined as a psychological capacity intimately related to the representation of the self, which involves both a self-reflective and interpersonal component that ideally provides the individual with a well-developed capacity to distinguish inner reality from outer reality. In other words it entails the ability to mentally understand intra-personal mental and emotional processes from overt interpersonal communications while also making an accurate attempt at mentally

understanding another's intra-personal mental and emotional processes (Fonagy et al., 1998). RF is anchored in careful study of how adults use, or fail to use, mental state language (beliefs and desires) when pressed to give an account of their developmental history (Steele & Steele, in Busch (2008) p. 134). It is derived from three scales pertaining to the mental processes underlining a speaker's language provided in response to the Adult Attachment Interview (Main and Goldwyn, 1993). These three scales are (a) coherence of transcript; (b) coherence of mind; and (c) metacognition (Steele & Steele, in Busch (2008) p. 138).

12) Mixed Emotion Understanding: This item measures evidence of the child's ability to identify mixed emotions occurring within the characters in the scenario. Mixed emotion understanding is defined as the ability to recognize that several different emotions can be experienced at the same time. Mixed emotion can be of two types: discrete feelings or emotions that occur simultaneously, or one feeling made up of the combination of two different emotions.

13) Sequential Emotion Understanding: This item measures the evidence for the child's ability to identify sequential emotions occurring for the characters in each scenario. Sequential emotion understanding is defined as the ability to recognize that emotions can develop and change as time goes on.

Inter-rater reliability for the coding matrix was yielded from seven individual raters on the Affect Task coding team. Interclass correlations were performed in order to examine rater reliability for each of the 13 constructs measured by the Affect Task.

INSERT TABLE 2 ABOUT HERE

Table 2 illustrates the individual interclass correlations that were performed in order to determine the amount of agreement among the seven raters for each coding variable, for all 12 scenarios [median ICC = .83 (range = .62 - .96)]. This shows that the measure can be coded reliably, which has promise for future administrations and scoring of the Affect Task. Given these high coefficients of reliability and internally consistent summary codes (averaged across the 12 cartoon responses), the Affect Task scoring results were reduced to the following composite scores: (1) secure base/safe haven for mother and (2) secure base/safe haven for father; (3) support from peers, (4) support from teachers, (5) acknowledgment of distress, (6) escalation of conflict, (7) coping resourcefully, (8) despair/helplessness, (9) reflective functioning, (10) mixed emotion, (11) sequential emotion.

Descriptive statistics for the children's rated composite responses to the Affect Task at Time 1 and Time 2 administrations are shown Table 3.1 and Table 3.2.

INSERT TABLE 3.1 ABOUT HERE

INSERT TABLE 3.2 ABOUT HERE

Inspection of skewness and kurtosis values for the distribution of the scores in Tables 3.1 and 3.2 revealed no significant deviations from the assumption of normality; and thus parametric statistics were relied on in the computation of results. Each variable was scored from 1 (no evidence) to 4

(marked evidence). On average, children's responses at Time 1 in relation to the variables 'mother as a secure base', 'mother as a safe haven', 'father as secure base', 'father as safe haven', 'support from peers', 'support from teachers', 'coping resourcefully', 'reflective functioning', 'mixed emotion understanding', and sequential emotion understanding' were scored with mild to moderate evidence at Time 1 and Time 2. On average, the variables 'escalation of conflict' and 'despair/helplessness' was scored from no evidence to mild evidence at Time 1 and 2. Finally, on average, the variable 'acknowledgment of distress' was scored with moderate evidence at Time 1 and 2, which was expected due to the underlying conflict presented in the majority of the scenarios described in the Affect Task.

Strengths and Difficulties Questionnaire. The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioral screening questionnaire designed for children aged 4-16 (Goodman, 1997). The SDQ is available for more than 60 languages and is available as a free download from (www.sdqinfo.com). The SDQ can be completed by parents and teachers, while youth reports are available for children aged 11-17. The All versions of the SDQ utilize a 3-point Likert scale (0-2) ranging from 'Not True', 'Somewhat True', to 'Certainly True'. The SDQ consists of 25 items relating to social, emotional, and behavioral functioning across five subscales: Conduct Problems, Inattention-Hyperactivity, Emotional Symptoms, Peer Problems, and Prosocial Behavior. A Total Difficulties score can also be derived by summing across the four problem scales. The scales are then scored as 'Normal', 'Borderline' or 'Clinical' ranges. The convenience

to classify scores is that it allows an analysis to screen for likely “cases” with mental health disorders and to compare the scores to a normative sample (refer to Appendix E). The reliability of the SDQ has been found acceptable (Goodman, 2001), and the predictive validity has been established in a clinical sample (Goodman et al., 2000b) as well as in a community sample (Goodman et al, 2000a).

Table 4.1 details the descriptive statistics for the SDQ subscales at Time 1, Time 2, Time 3, and Time 4. There were no significant deviations from the assumption of normality for the Total Difficulties Score at any of the four administrations of the SDQ, therefore parametric statistics were relied on in the computation of results. The frequencies for the ‘Normal’, ‘Borderline’, and ‘Clinical’ ranges at the four points in time were also reported in Table 4.2.

INSERT TABLE 4.1 ABOUT HERE

INSERT TABLE 4.2 ABOUT HERE

Procedure

The university IRB granted approval for all procedures described and utilized in this study. Parental consent was obtained via the afterschool program. ID number identified the data collected from the children, in order to maintain confidentiality of the information provided. Data collection took place at four points in time, during the hours the afterschool program is held. The Affect Task was administered to the participants when they were in second or third grade, and then again when the

participants were in fourth or fifth grade. Children's responses to the Affect Task were audio-recorded, and later used to score the child's understanding of ambivalent, mixed, and sequential emotions. The Strengths and Difficulties Questionnaire was given to the counselors at the IHAD program to fill out for the participants when the Affect Task was administered, and then again at two later dates over the next 4 years.

The descriptive statistics for the Affect Task and the SDQ were run and analyzed and summative variables were computed. Interrater reliability scores were computed and reported for the Affect Task, and internal consistencies for both the Affect Task and SDQ at all points in time were also computed and used to justify summative variables. These variables were later used to explore validity of the Affect Task and change in the SDQ over time.

Results

Preliminary analysis reports on links between the Affect Task and SDQ responses at each time period, and children's gender and ethnic identity. The following two sections presents stability over time in children's responses to the Affect Task and explores intra-correlations among the rated constructs applied to the children's Affect Task responses at both Time 1 and Time 2. Following this, summative variables were computed for the Affect Task to reduce Type I errors, and the composite measure of the Affect Task is correlated with the SDQ Total Difficulties score to demonstrate validity of the Affect Task, with concurrent and predictive validity presented separately. Lastly, the third section reports on the change over time in observed

difficulties comparing the SDQ Total Difficulties at Time 1 and Time 4. Results should be viewed with caution due to the small sample size.

1. Demographics and the Affect Task and SDQ responses

At Time 1, girls scored higher than boys in terms of their ratings for mother secure base (girls' $M = 2.57$, $SD = .69$; boys' $M = 2.05$, $SD = .52$, $t(1,31) = 2.41$, $p < .05$, two-tailed). Girls also scored higher than boys in terms of their ratings for father safe haven at Time 1 (girls' $M = 2.67$, $SD = 1.07$; boys' $M = 1.95$, $SD = .80$, $t(1,31) = 2.17$, $p < .05$, two-tailed). However, when the secure base and safe haven scores were collapsed, these significant gender differences were no longer evident. There were no gender differences observed at Time 2 in Affect Task responses. Furthermore, no differences in Affect Task responses were observed when the scores were grouped according to ethnicity, at Time 1 or Time 2. Similarly, no significant differences based on ethnicity were detected in SDQ subscale scores at Time 1, Time 2, Time 3, or Time 4. Gender differences were only observed in the Hyperactivity scale at Time 2, with boys scoring slightly higher than girls (boys $M = 4.65$, $SD = 1.54$; girls $M = 3.00$, $SD = 2.00$, $T(1,25) = 2.40$, $p < .05$, two-tailed).

2. Intra-correlations of the 13 Affect Task scoring criteria at Times 1 and 2

In order to explore the links among the various rated features of the children's responses to the Affect Task at each time period, bivariate correlations were carried out for the 13 constructs measured by the Affect Task. Of particular interest was the

correlation between maternal and paternal secure base/safe haven scores and how they were associated with items measuring constructs related to affect regulation and emotional understanding. Table 5 and 5.1 illustrates the bivariate intra-correlations between maternal and paternal secure base/safe haven scores and other Affect Task responses at Time 1 and 2.

INSERT TABLE 5.1 ABOUT HERE

Table 5.1 reveals that at the first administration, when children were between the ages of 7 and 8, their representations of attachment figures, as prompted by the cartoon stories on the Affect Task, were significantly related to several items measuring varying constructs related to affect regulation and emotional understanding. At Time 1, children's responses on the Affect Task concerning representations of mother as a secure base and secure haven were significantly positively correlated to coping resourcefully, $r = .50$, $p = .006$; and mixed emotion $r = .41$, $p = .030$. Representations of father as a secure base and safe haven were negatively correlated, at a significant level, to escalation of conflict, $r = -.42$, $p = .024$; and despair/helplessness, $r = -.43$, $p = .020$.

INSERT TABLE 5.2 ABOUT HERE

Table 5.2 reveals that at the second administration, when children were between the ages of 9 and 10, their representations of attachment figures, as prompted by the cartoon stories on the Affect Task, were significantly related to constructs measuring representations of peer relationships, affect regulation, and emotional understanding.

At this later age, children's representation of mother as a secure base and safe haven were significantly correlated to additional items measured by the Affect Task than at the earlier administration. Most notably, higher scores on items measuring representation of mother as a secure base and safe haven children were positively correlated to items measuring emotional understanding, such as, reflective functioning, $r = .71, p < .001$; mixed emotion, $r = .55, p = .006$; and sequential emotion, $r = .69, p < .001$. Additionally, at this later age, children who scored higher on responses related to representations of mother as a secure base and safe haven were also more likely to have higher scores on items related to affect regulation, such as coping resourcefully, $r = .84, p < .001$. Higher scores on responses related to representations of mother as a secure base and safe haven were also negatively correlated to constructs such as escalation of conflict, $r = -.54, p = .006$, and despair/helplessness, $r = -.58, p = .003$. This correlation indicates that children who reported the mother in the stories as acting as a secure attachment figure were more likely to report a resolution in the cartoon stories on the Affect Task. Children scores on representations of father a secure base were positively correlated with items related to emotional understanding, such as those measuring reflective functioning, and sequential emotion, but were unrelated to mixed emotion. Lastly, there was a significant positive correlation between mother as a secure base/safe haven and support from peers, $r = .51, p = .017$. There was also a significant positive correlation between father as a secure base/safe haven and support from peers, $r = .45, p = .034$. These correlations suggest that children who had

representations of parental behavior that was supportive, also tended to report peers as being supportive figures within the cartoon stories in the Affect Task.

3. Stability over time in Affect Task Responses

In order to investigate the stability or change over time in rated responses to the Affect Task at ages 7 to 8 and 9 to 10 years, a paired-samples t-test was conducted to compare the main 13 coding constructs at each administration. Results are reported below in Table 6.

INSERT TABLE 6 ABOUT HERE

Table 6 reveals that the majority of the scores showed no significant differences between the Time 1 and Time 2 condition. However, there was a trend approaching significance for scores of reflective functioning between Time 1 ($M = 2.43$, $SD = .55$) and Time 2 ($M = 2.66$, $SD = .55$) conditions, $t(1,23) = 1.76$, $p = .092$. There was a significant difference in the scores for support from peers for Time 1 ($M = 2.18$, $SD = .65$) and Time 2 ($M = 2.66$, $SD = .63$) conditions, $t(1,21) = 2.59$, $p = .017$; despair/helplessness for Time 1 ($M = 1.33$, $SD = .37$) and Time 2 ($M = 1.65$, $SD = .58$) conditions, $t(1,24) = 2.53$, $p = .019$; and mixed emotion for Time 1 ($M = 2.19$, $SD = .65$) and Time 2 ($M = 2.63$, $SD = .60$) conditions, $t(1,23) = 3.33$, $p = .003$. Despite being significantly higher at Time 2, the overall means of item responses remained in the same range as they were at Time 1.

4. Data reduction and reliability of Affect Task Responses

Prior to the main analyses, we computed a summative variable to reduce Type I errors. “Emotion Understanding” was the sum of all Affect Task variables measuring ‘felt security’ (mother secure base/haven behaviors, father secure base/safe haven behaviors, support from teachers, and support from peers) and ‘theory of mind’ (reflective functioning, sequential emotion, and mixed emotion). The internal consistency reliabilities (Cronbach’s alpha) for the Emotion Understanding composite measure at Time 1 ranged from .71 to .81 ($\alpha = .79$), suggesting that the seven components of this measure are reasonably statistically coherent. As for the internal consistency reliability for Time 2, Cronbach’s alpha ranged from .80 to .84 ($\alpha = .84$) for the seven components of the summative variable, again suggesting that these constructs are statistically reliable. This preliminary reliability analyses are important as unreliability attenuates correlations.

5.1 Concurrent validity of the Affect Task

To examine concurrent validity of the Affect Task, we looked at its association with an independent measure of mental health, the SDQ, at two concurrent points in time. Specifically, we conducted bivariate zero-order correlations between the summative variable Emotion Understanding (derived from constructs of the Affect Task) and the Total Difficulties scale at Time 1 and Time 2. Because the hypothesis was unidirectional as we expected an inverse relationship, we report one-tail p values. Results indicated a modest negative association between Emotion Understanding and

Total Difficulties scores at Time 1 ($r = -.356, p < .05$). A bivariate zero-order correlation for these variables at Time 2 demonstrated a moderate negative correlation ($r = -.445, p < .05$). These data suggest that higher levels of emotion understanding were associated with lower levels of reported emotional and behavior problems at the respective concurrent time points.

5.2 Predictive validity of the Affect Task

To test predictive validity of the Affect Task, we conducted bivariate zero-order correlations between Emotion Understanding at Time 1 and Total Difficulties scores at Time 2, Time 3, and Time 4. Again, because the hypothesis is unidirectional and we expected an inverse relationship between the two variables, one-tail p values are reported. Results indicated a modest negative correlation between Emotion Understanding at Time 1 and Total Difficulties at Time 2 ($r = -.559, p = <.01$). Results indicated a modest negative correlation between Emotion Understanding at Time 1 and Total Difficulties at Time 3 ($r = -.526, p <.01$). Although the relationship between Emotion Understanding at Time 1 and Total Difficulties at Time 4 was trending in the expected direction, the result was not significant ($r = -.096, p = ns$). There was a modest negative correlation between Emotion Understanding at Time 2 and Total Difficulties at Time 3 ($r = -.403, p <.05$) but no significant relationship between Emotion Understanding at Time 2 and Total Difficulties at Time 3 $r = -.181, p = ns$).

6. *Change over time for SDQ Total Difficulties scale and subscales*

In order to estimate the extent of possible significance of change in overall SDQ difficulties' scores across the four time periods of teachers' assessments, an ANOVA with repeated measures was computed for the available cases with information at each of the four time periods ($N = 17$). The resulting F-value for the linear solution was significant, $F = 5.88$, $df 1,16$, $p < .05$. The F-value for the quadratic solution was also significant, $F = 4.79$, $p < .05$. An ANOVA for repeated measures was computed for available cases for each of the SDQ subscales (Emotional Problems, Conduct Problems, Hyperactivity, Peer Problems, Prosocial Behavior) with information at each of the four time periods to examine possible significance of change over time. The resulting F-value for the linear solution for Emotional Problems was significant, $F = 6.23$, $df 1, 16$, $p < .05$. The F-value for the quadratic equation was also significant, $F = 4.60$, $df 1, 16$, $p < .05$. For Conduct Problems, the F-value for the linear solution was significant, $F = 3.11$, $df 1, 16$, $p < .10$. The F-value for the quadratic solution for Conduct Problems was not significant. Similarly, for Hyperactivity the linear equation was significant, $F = 8.77$, $df 1,16$, $p < .005$, while the quadratic solution was not significant. An ANOVA for repeated measures for Peer Problems and Prosocial Behavior was not significant. The mean scores for SDQ subscales and the pair-wise contrasts, highlighting the source of this significance are shown below in Table 7, and illustrated in Figures 1 – 4.

INSERT TABLE 7 ABOUT HERE

INSERT FIGURE 1 ABOUT HERE

INSERT FIGURE 2 ABOUT HERE

INSERT FIGURE 3 ABOUT HERE

INSERT FIGURE 4 ABOUT HERE

Discussion

This study aimed to extend previous research linking secure attachment representations to social cognition and emotional understanding. The principal aim of this current study was to demonstrate that the Affect Task is a reliable and valid assessment of emotion understanding in middle childhood. This was explored by relating the Affect Task with an independent measure of mental health, in this case the Strengths and Difficulties Questionnaire, concurrently and predictively over time. Lastly, this study speculated whether continued participation over seven years in the I Have a Dream program would lend itself to decreased emotional and behavioral problems as observed by the staff in the afterschool program. The discussion below addresses each of these questions, and also considers contemporary approaches for assessments of emotion understanding and attachment in middle childhood, as well as the implications for interventions targeting at-risk populations.

An overview of the Dreamers' engagement with the task

The Dreamers were in second and third grade when the Affect Task was first administered, and in fourth and fifth grade when it was administered for the second time. At both times, the vast majority of respondents were interested and engaged in the experience, suggesting that the Affect Task is an appropriate tool for the elementary school years. The sample was ethnically diverse with more-or-less equal representation of children from African-American, Asian and Hispanic homes. Of interest, no ethnic differences were observed in Affect Task responses, suggesting the task has wide applications and can be generalized for use with various ethnic affiliations. It may be that the composition of the cartoons themselves helped children engage with the task, as the pictures include characters of varying skin color and hairstyle.

Gender differences were observed at the first administration of the Affect Task, with girls scoring higher than boys in terms of their ratings for mother as a secure base and father as a safe haven. Although some studies have revealed gender differences in insecure patterns of attachment in middle childhood (with males being more likely to be classified as insecure-avoidant, and females being more likely to be classified as insecure-resistant) as a prelude to gender differentiations in reproductive strategies (Del Giudice, 2009), other studies report that the majority of attachment effects were invariant across gender and racial groups, and across major developmental periods within adolescence (Cooper et al., 1998; Bakermans-Kranenburg and van IJzendoorn, 2009). Bakermans-Kranenburg and van IJzendoorn (2009) reviewed distributions of

attachment in middle childhood, as related to gender, and found that this gender effect was measurement specific, and that systematic errors of measurement might be the source of the difference. The Affect uses a coding system that focuses both content and coherence when assessing representations of parental behavior, so it might be that there are subtle gender differences that are not fully flushed out with the current coding system. In addition, since there was no significant gender difference found at the second administration, it might be that subtle differences in verbal abilities between boys and girls at an earlier age could have had a confounding effect.

Gender differences in mental health have been demonstrated in previous research, with anxiety and depression being more prevalent among girls and a higher incidence of externalizing disorders in boys (Thomas et al., 2011; Seedat, 2009). There were no significant gender differences observed in this sample, possibly due to the small sample size or the fact that the SDQ does not identify specific mental health disorders, but rather broad difficulties. Large epidemiologic studies of child psychopathology have typically not focused on ethnic group differences in symptoms or have not included substantial numbers of ethnic minorities using the same measures (Choi et al., 2006; McLaughlin, 2007).

Parental representations and intra-correlations to other scores

The final prediction, that children who scored higher on responses related to representations of mother and father as a secure base and safe haven would also have a greater representational capacity for affect regulation and emotional understanding

reflected in their Affect Task responses was also supported. However, there are several distinctions in terms of mother versus father secure base/safe haven representations that must be looked at more closely. At the earlier administration, children who had internalized representations of the father character as a secure base/safe haven, had decreased evidence of escalation of conflict, as well as lower levels of despair or helpless in relation to the central conflict. This specific finding suggests that, within this particular sample, representations that include the father figure as emotionally available and offering support and comfort when needed are linked with a more adaptive coping style at an earlier age. Steele and Steele (2001) found, using the Friends and Family Interview, which asks about the child's most and least favorite aspects of themselves, and their relationship with their mother, father, sibling(s), and best friend, that the father-child relationship linked to social conflict-resolution strategies involving siblings and peers. The Affect Task cartoons are composed of several scenarios that involve either siblings or peers, which might have similarly captured aspects of this distinct relationship.

Children who scored higher on responses related to representations of mother as a secure base/safe haven were significantly correlated with higher scores on items related to mixed emotion understanding, at both administrations of the Affect Task, however there was no link between representations of the father as a secure base/safe haven and higher scores on items measuring emotion understanding. At Time 2, children responses that reflected representations of a maternal figure as a secure base/safe haven had significantly higher scores on all items measuring emotion

understanding and metacognition on the Affect Task (i.e. reflective functioning, mixed emotion, and sequential emotion understanding) It might be that identifying and understanding ambivalent or mixed emotions is uniquely related to the mother-child relationship. These findings replicate earlier studies (Steele et al, 1999) that representations of the mother as a secure base/safe haven has a more significant role in facilitating a mature understanding of emotion in others, especially the concept of mixed emotions.

Attachment theory suggests that children form a representational model of self (in relation to others) that includes expectations of their own worthiness (Cassidy, 1988). Children are more socially competent and have more supportive social networks due to the emotional awareness and expressive skills they internalized from a secure attachment relationship in early childhood (Liable, 2007). At Time 2, children's representations of mother and father as a secure base/safe haven were almost equally associated with identifying peers in the cartoons on the Affect Task as more supportive. This has implications that there are qualities of early parent-child attachment that can be generalized in middle childhood to include peer groups. Future studies should also aim to address the influence that peer attachment has on the development of social understanding and emotional competence.

Stability and change in the Affect Task over time

A number of the coded categories applied to the Affect Task did not change over time. These included 'mother as a secure base', 'mother as a safe haven', 'father

as a secure base', 'father as a safe haven', 'support from teachers', 'acknowledgment of distress', 'escalation of conflict', 'coping resourcefully', and 'sequential emotion'. This continues to highlight the continuity of attachment relationships in middle childhood, especially when the family environment remains stable. Children assessed with the Affect Task at the later administration were less likely to have had major life-disruptions (judged by continued participation in the after-school program) that could have affected and changed representations of parental relationships. Scores on items more indicative of affect regulation scores were also seen as stable over the 2-year period between administrations of the Affect Task. Parental figures are regarded as essential influences on children's affect regulation and problem solving abilities in early childhood (Cassidy, 1994). Thus, affect regulation strategies experienced with the primary caregiver at an early age is internalized, and helps to guide later internally oriented strategies, generalized to contexts outside the parent-child relationship. Lastly, sequential emotion understanding was also seen as generally stable over both administrations of the Affect Task. Viewing emotion understanding and metacognition from a developmental perspective, it might be that sequential emotion understanding, defined as the ability to recognize that emotions can develop and change as time goes on, is internalized and expressed at an earlier age.

For some of the coded categories applied to the Affect Task, significant change over time was noted, including 'support from peers', 'despair/helplessness', 'reflective functioning', and 'mixed emotion'. Surprisingly, scores that reflected the main character in the cartoons as being in a state of despair or helpless to cope with the

conflict presented in the stories, was significantly higher at the later administration. Due to the small sample size and the contrary nature of this specific inference, deductions related to this outcome can only be speculative. This might be due to children having a more realistic understanding of their own limitations in social situations, related to developing maturity in aspects of social cognition at a later age.

Reflective functioning and mixed emotion were scored significantly higher in the second administration of the Affect Task, suggesting that these are more sophisticated aspects of metacognition and emotion understanding, which become more fully elaborated with age, as children's verbal and mental capacities are better developed. Support from peers was also scored significantly higher in the sample overall at Time 2 of the Affect Task administration. This can be attributed to the quest for autonomy relevant to this age group, where peers begin to take on a more significant role in a child's social world and intimacy and stability of friendships increase. In sum, stability was reflected in representations of parental figures and coping skills, while items related to mature aspects of metacognition, such as reflective functioning and mixed emotion, were more subject to change due to rapid growth in abstract reasoning in middle childhood.

Linking the Affect Task and SDQ

Despite increasing evidence in support of the development and consolidation of emotion understanding in middle childhood, the significant gap in the literature is partly due to the lack of empirically validated assessment measures for older children.

Reliance on an observational method of measuring attachment and emotion understanding does not sufficiently reflect the complexity of a child this age. A case has been made for using a performance-based measure driven by attachment theory; especially given the central role attachment plays in the development of emotion understanding and regulation (Cassidy, 1994). The Affect Task is unique as an assessment tool as it also includes representations of peers and teachers. Not only is middle childhood regarded as the period in which early, relationship-specific internal models are integrated into generalized representations, but this is also when peers and adults outside the family circle begin to serve a significant role in the attachment system. The present findings lend support for the Affect Task as a valid measure of emotion understanding in middle childhood, due to its correlations with observations of mental health and functioning.

As hypothesized, there was a modest inverse relationship between Affect Task responses measuring felt security and emotion understanding and total difficulties as reported by the SDQ concurrently in time. This suggests that higher levels of emotion understanding at both Time 1 and Time 2 were associated with lower levels of reported emotional and behavior problems. Previous longitudinal research has shown that there are marked differences even among typically developing children in their understanding of emotion, and that these differences appear to be associated with earlier variations in the child's family environment (Dubois-Comtois et al., 2013; Pons et al., 2004; Steele et al., 1999). It has been speculated that due to familial socialization, some children are more comfortable verbally expressing their feelings,

whereas others learn that their emotional expressions will be invalidated and they will act out instead (Cook et al., 2004). The correlation was slightly more robust at the second administration, when the children were 9 years old.

Studies have demonstrated that the cognitive and social advances in middle childhood increase emotional self-awareness, as well as the ability to understand and express complex social emotions (Pons et al., 2004; Tenenbaum et al., 2008). Pons, Harris, and de Rosnay (2004) found that the period between 9 and 11 years old is characterized by an understanding of how individuals can reflect upon a given situation from various perspectives and thereby trigger mixed or distinct feelings either concurrently or successively. One can speculate that since these skills are consolidated in later childhood it is more likely that children with lower emotion understanding skills at this later age might demonstrate deficits in other areas, such as behavior, social well-being, or academic success (Denham, 2003; Dunn & Cutting, 1999, Kats-Gold & Priel, 2009; Onchwari & Keengwe, 2011), making the connection between underdeveloped emotion understanding and concurrent behavior problems more significant.

It was also hypothesized that Affect Tasks responses reflecting high levels of felt security and emotion understanding at Time 1 and Time 2 would predict lower levels of observed emotional and behavior problems at future administrations of the Affect Task. We found that the Affect Task predicted emotional and behavior problems in middle childhood (when the participants were 9 and 11), but not at age 13. With the onset of adolescence, children undergo major changes in their social and

physical development, as well as changes in their behavioral repertoire, cognitive capacities and moral development (Carlson et al., 1999; Jacobsen & Hofmann, 1997).

We can speculate that perhaps the Affect Task is a measure that captures a unique aspect of middle childhood that is not present in adolescence. The added stress of puberty, as well as the academic and social pressures of high school achievement might simply overwhelm available resources and protective factors that derive from emotional understanding and attachment security.

Afterschool programs and at-risk populations

Over time, problems across multiple domains have an additive risk effect and limit options for change (Moffitt, 1993; Wyman et al., 2010). In nurturing environments, young children's problematic behaviors are often corrected. Since parents and children often resemble each other in temperament and personality, parents of children who are difficult to manage often lack the necessary psychological and physical resources to cope constructively with a difficult child (Scarr & McCartney, 1983; Snyder & Patterson, 1987; as cited in Moffitt, 1993). In disadvantaged homes, schools, and neighborhoods, these behaviors are often exacerbated rather than appropriately modified; and will gradually elaborate into conduct problems and decreased prosocial skills. Children with internalizing and externalizing problems may withdraw from social relationships to minimize their exposure to negative interactions, which heightens their isolation in school (Mcleod and Kaiser, 2004). Previous research has indicated that children who manifest behavior problems in early elementary school

will continue to display behavior problems into middle school, and will be at considerable risk for poor school outcomes, including truancy and delinquency (Montague, 2005). This underscores the need for early prevention and intervention programs to target emotional and behavioral difficulties before they are integrated and consolidated into the personality structure of the child.

Earlier studies have indicated that youth who participate in afterschool programs that offer structure, adult supervision, and enriching activities demonstrate improved academic, behavioral, and socioemotional outcomes (reviewed in Durlak & Weissberg, 2007). Current findings suggest that children's continued participation IHAD led to a significant decrease in emotional and behavior problems, as observed and reported by the counselors in the afterschool program. Significant linear effects suggest that over time the IHAD program enhanced students' behavioral adjustment by reducing conduct problems and hyperactivity.

There were both significant linear and quadratic effects for total difficulties and emotional problems. This suggests that while IHAD attenuates these difficulties overall, there was a slight increase in observed emotional problems and total difficulties as the children entered adolescence. Moffitt (1993) deduced that temporary, situational antisocial behavior is quite common in the population, especially among adolescents. Salient puberty changes make the remoteness of ascribed social maturity painfully apparent to adolescents. This new awareness arrives as they enter high school, where the social hierarchy is dominated by older youth. According to this theory of adolescence-limited antisocial behavior, a contemporary maturity encourages

teens to mimic antisocial behavior in ways that are both normative and adjustive (Moffitt, 1993). Therefore, this slight increase in observed difficulties and emotional problems might reflect an expected trajectory for this age group, as adolescents try and cope with the widening gap between biological and social maturity.

A number of factors may have contributed to the positive effects seen in this present study, and highlight the importance of intensive and long-term afterschool programs for at-risk children. The ‘I Have a Dream’ – New York program (<http://www.ihaveadreamny.org>) is first and foremost a college access program, and their primary goal consists of all the ‘Dreamers’ attending and graduating from college. Therefore academic programming takes a prominent role in all activities, including: homework help, one-to-one tutoring and small group instruction, specialized workshops to improve writing, math and vocabulary skills, as well as test prep for NY State Exams, SATs and ACTs. Although this current study did not focus on academic outcomes, a program evaluation from 2010 (prepared by Arete consulting) shows measurable academic improvement within a few years of participation in the IHAD-NY program regardless of the host school. This trend contrasts with the typical trend for inner city schools, where achievement gaps commonly grow larger over time. The academic support offered might increase the overall engagement of the ‘Dreamers’ within their school environment, leading to improved feelings of self-worth and efficacy, and more positive interactions with teachers and peers.

This study also indirectly examines the influence of other supportive relationships, beyond the parent-child relationship, on levels and trajectories of behavior problems in children. Many of the staff involved in the IHAD-NY program have worked with the ‘Dreamer’ cohort for multiple years, and are actually alumni of the program. The IHAD program also pair ‘Dreamers’ with mentors at a young age. These relationships often span the entire duration of the program, providing strong adult modeling and support. Each cohort has at least one social worker on site providing individual and group counseling, mental health programming, and on-site referral services. Each site also has a Boys Group and Girls Group that meets to discuss topics relevant to growing up such as, communication, relationships, self-esteem, and body image. IHAD encourages students’ families to participate in family counseling and parenting workshops.

This study extends the knowledge of afterschool programs as both academic and social support for young high-risk children and suggests potential avenues for future investigations. One of the strengths of school-based programs is the ability to provide accessible, wide-range intervention to children who might not otherwise receive services. In a time where young children are increasingly involved in relationships and contexts outside the familial structure, the influence of these programs on developmental outcomes deserves special attention, particularly as they relate to children from high-risk homes.

Limitations and future directions

In summary, this present study confirms and extends inferences from previous research linking secure attachment representations to social cognition and emotional understanding. This study aimed to validate the Affect Task as a reliable and consistent measure of emotion understanding and attachment representations in middle childhood, and highlight the effectiveness of afterschool programs as interventions for at-risk children. Nevertheless, despite many strengths, including being in the context of a longitudinal design and using multiple raters, there were several limitations to this current study. The primary limitation was the relatively small sample size. Future research should be aimed at looking at these links between constructs measuring attachment representation and social cognition and emotion understanding using a larger, more diverse sample. This study did not address which aspect of the I Have A Dream program is most effective in mediating change within a high-risk population. Further research focused on afterschool programs' as interventions should aim to answer what aspect of these programs is most effective at targeting change.

Future research with at-risk populations also needs to consider the role of fathers or male caregivers in emotional development when there is lack of paternal involvement in children's lives. Although family composition was assessed during the first administration of the Affect Task, it was not clear how much contact the children had with the parent living outside the home (most usually the father), if they came from a single-parent household. Although distinct differences between mother-child and father-child relationships were observed, the Affect Task is restricted, such that the

cartoons comprising the measure include only one story that prompts the child to address representations of the father as an attachment figure, as opposed to five stories that prompt for feelings related to a maternal figure. As previously argued by Steele et al. (1999), in order to fully test the influence of the father upon children's emotional understanding in middle childhood, the stimuli relied upon should be updated to include maternal and paternal images in more equal measures. Another critical issue in examining the effect of father's influence pertains to the contemporary definition of father (Williams & Kelly, 2005). Future research efforts might benefit by using broader and more inclusive definitions to capture how other significant male figures, such as teachers or coaches, impact areas of child development.

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Affect Task

PROTOCOL & PROMPT SHEET **for YOUNG CHILDREN**

*Miriam Steele, Howard Steele
& Peter Fonagy (1994)*

The whole task (all Stories and the Introduction) should be audio-recorded for the purpose of coding. A companion coding system to this protocol, authored by Carla Croft & Howard Steele (1995) is available from Dr Howard Steele, Primary Researcher, The Center for Attachment Research, The New School for Social Research, Room 369, 65 5th Avenue, New York, NY 10011

Introducing the Affect Task

"I am going to show you some cartoons that make up short stories, and what I would like you to do is to look at the cartoons and listen to the story, and then tell me what do you think the people in the story are feeling.

But first, I have here some pictures of some faces **[bring out faces sheet]** can you tell me what each face is showing? What are they feeling? Write it down under the face, there **[point]**."

- Encourage the child to give their own response, and emphasize there are no right or wrong answers, just what they think is fine. Do not correct them if their responses differ from the "correct" response.
 - Go through the faces in order, left column down, then right column down.
 - Repeat the child's written response, but also later into the task their verbal responses, and describe their actions (eg. "So you've put two faces, angry and sad, on the boy with the blue shirt") for the tape.
-

"Now, listen carefully to the stories..."

For each story, bring out the appropriate slides in order.

(1) Tell the story as it is given in the following prompt sheets.

(2) Immediately after telling the story ask about the child protagonist -what, why etc. Ask the child to physically place a face on a character, this focuses their attention.

Only ask them to put a face for the *1st Feeling*, but allow the child to put on faces for *2nd Feeling*, etc. if they want to.

Note the face choices, and any other words or adjectives the child may use in to describe the feelings, in the boxes in Table (6).

(3 & 4) If there are any "special" characters, such as Mom, Dad, Teacher or other children, ask these sections. Again ask them to put a face on.

-Note the face choices, and any other words or adjectives the child may use in to describe the feelings, in the boxes in Table (6).

(5) Review the story by asking what led up to this, what had happened before, and how will it turn out, what will happen next. These might have already been referred to in the previous questions, especially when asking 2.v and 2.vi, but give the child the opportunity to make up another story if they wish.

PART A: Identification of Facial Expressions

1. Ask the child to identify the facial expressions. Record the facial choice in the box below 2.

In the box next to each face, record the quality of the answer

0 = no answer/incorrect

1 = atypical/partially correct

2 = typical/correct

<u>Face Choice</u>	<i>Circle answer based on face choice</i>	<u>Face Choice</u>	<i>Circle answer based on face choice</i>
<p>1. Afraid</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>	<p>6. Disappointed (mixed)</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>
<p>2. Angry</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>	<p>7. Neutral</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>
<p>3. Sad</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>	<p>8. Happy</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>
<p>4. Disgust</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>	<p>9. Surprise</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>
<p>5. Mischievous (mixed)</p> <p>word choice _____</p> <p>face choice _____</p>	<p>0 = no answer / incorrect</p> <p>1 = atypical / partially correct</p> <p>2 = typical / correct</p>		

PART B: The Cartoon Scenarios

The whole task (all Stories and the Introduction) should be audio-recorded for the purpose of coding.

Story 1: ICE CREAM

1. Tell the story, pointing to the characters:

(Slide One): This little boy/girl here just got this great ice-cream cone, and see, he/she is really happy and excited!

(Slide Two): Uh-oh, look what happened!

2.Face Choice

i) **How** do you think the little boy/girl feels now?

a. Can you pick a face to put on?

ii) **Why** do you think he/she is feeling this way?

3.Mixed Emotion

i) Do you think the little boy/girl could be feeling **anything else** at the same time?

a. Can you pick a face to put on?

b. **Why** do you think he/she is feeling this way

4.Sequential Emotion

i) He/She is feeling [X] way now?

a. Do you think this feeling will **change**?

Why?

b. Can you pick a face to put on?

5.

i) **What could he/she do to make herself feel different?**

ii) **What do you think will happen next?**

6. As the child is speaking, note the face and words he/she uses

	1st Feeling	Mixed Feeling	Sequential Feeling
<i>Word choice:</i>	_____	_____	_____
<i>Face Choice:</i>	_____	_____	_____

Story 2: BICYCLE

1. Tell the story, pointing to the characters:

(Slide One): Look this little boy/girl is riding past Mom and Dad on his/her bicycle

(Slide Two): Uh-oh, it looks like he/she has fallen off his/her bike.

2.

3.

4.

<i>Face Choice</i>	<i>Mixed Emotion</i>	<i>Sequential Emotion</i>
iii) How do you think the little boy/girl feels now? a. <u>Can you pick a face to put on?</u> iv) Why do you think he/she is feeling this way? v) How do you think Mom feels now? a. <u>Can you pick a face to put on?</u> vi) Why do you think Mom is feeling this way? vii) How do you think Dad feels now? a. <u>Can you pick a face to put on?</u> viii) Why do you think Dad is feeling this way?	i) Do you think the little boy/girl could be feeling anything else at the same time? b. <u>Can you pick a face to put on?</u> ii) Why do you think he/she is feeling this way? iii) Do you think Mom could be feeling anything else at the same time? Why? a. <u>Can you pick a face to put on?</u> iv) Do you think Dad could be feeling anything else at the same time? Why? a. <u>Can you pick a face to put on?</u>	i) He/She is feeling [X] now. a. Do you think this feeling will change? Why? b. <u>Can you pick a face to put on?</u> ii) Mom is feeling [Y] now. a. Do you think this feeling will change? Why? <u>Can you pick a face to put on?</u> iii) Dad is feeling [Z] now. a. Do you think this feeling will change? Why? b. <u>Can you pick a face to put on?</u>

5.

- | |
|----------------------------------------------------------------------------------------------------|
| i) What could he/she do to make herself feel different?
ii) What do you think will happen next? |
|----------------------------------------------------------------------------------------------------|

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Mom	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Dad	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 3: PUZZLE with DAD

1. Tell the story, pointing to the characters:

(Slide One): This little boy/girl is working on his/her jigsaw puzzle. It looks like a big and difficult puzzle. And look, his/her Dad has just come home from work and it looks like he/she would like him to help. Look how he/she is showing his/her Dad the puzzle.

(Slide Two): And now look, Dad looks busy reading his newspaper

2.	3.	4.
<p><u>Face Choice</u></p> <p>ix) How do you think the little boy/girl feels now? a. <u>Can you pick a face to put on?</u></p> <p>x) Why do you think he/she is feeling this way?</p>	<p><u>Mixed Emotion</u></p> <p>v) Do you think the little boy/girl could be feeling anything else at the same time? a. <u>Can you pick a face to put on?</u> b. Why do you think he/she is feeling this way</p>	<p><u>Sequential Emotion</u></p> <p>vi) He/She is feeling [X] way now? a. Do you think this feeling will change? Why? b. <u>Can you pick a face to put on?</u></p>

5.

- i) **What could he/she do to make herself feel different?**
- ii) **What do you think will happen next?**

6. As the child is speaking, note the face and words he/she uses

	1 st Feeling	Mixed Feeling	Sequential Feeling
<i>Word choice:</i>	_____	_____	_____
<i>Face Choice:</i>	_____	_____	_____

Story 4: PARENTS with SUITCASES

1. Tell the story, pointing to the characters:

(Slide One): Look, Mom and Dad have their suitcases. They are going away for the weekend.

(Slide Two): Now he/she is watching them leave.

(Slide Three): Now they are off...

2.

Face Choice

- xi) **How** do you think the little boy/girl feels now?
a. Can you pick a face to put on?
- xii) **Why** do you think he/she is feeling this way?

3.

Mixed Emotion

- vi) Do you think the little boy/girl could be feeling **anything else** at the same time?
a. Can you pick a face to put on?
b. **Why** do you think he/she is feeling this way

4.

Sequential Emotion

- ix) He/She is feeling [X] way now?
a. Do you think this feeling will **change**?
Why?
b. Can you pick a face to put on?

5.

- i) **What could he/she do to make herself feel different?**
ii) **What do you think will happen next?**

6. As the child is speaking, note the face and words he/she uses

	1st Feeling	Mixed Feeling	Sequential Feeling
<i>Word choice:</i>	_____	_____	_____
<i>Face Choice:</i>	_____	_____	_____

Story 5: DRAWING with BABY SIBLING

1. Tell the story, pointing to the characters:

(Slide One): Look this boy/girl is busy working on a drawing, while his/her baby brother/sister is sitting in his chair nearby.

(Slide Two): Oh here comes Mom.

(Slide Three): The boy/girl wants to show her the picture...But Mom is ever so busy feeding the baby.

2.

Face Choice
 i) **How** do you think the little boy/girl feels now?
 a. Can you pick a face to put on?
 ii) **Why** do you think he/she is feeling this way?
 iii) **How** do you think Mom feels now?
 a. Can you pick a face to put on?
 iv) **Why** do you think Mom is feeling this way?

3.

Mixed Emotion
 i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 b. Can you pick a face to put on?
 ii) Why do you think he/she is feeling this way?
 iii) Do you think Mom could be feeling anything else at the same time? Why?
 a. Can you pick a face to put on?

4.

Sequential Emotion
 i) He/She is feeling [X] now.
 a. Do you think this feeling will **change? Why?**
 b. Can you pick a face to put on?
 ii) Mom is feeling [Y] now.
 a. Do you think this feeling will **change? Why?**
Can you pick a face to put on?

5.

- i) What could he/she do to make herself feel different?
- ii) What do you think will happen next?

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Mom	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 6: MOM and CHILD in the KITCHEN

1. Tell the story, pointing to the characters:

(Slide One): Mom is telling this little boy/girl “No more cookies! Don’t go near that cupboard!” Then, Mom leaves the room

(Slide Two): Look, the little boy/girl is taking a chair to climb up to the cupboard

(Slide Three): Uh-oh, Mom comes back and sees the little boy/girl going to the cupboard and taking the cookies out.

2.

Face Choice
 i) **How** do you think the little boy/girl feels now?
 a. Can you pick a face to put on?
 ii) **Why** do you think he/she is feeling this way?
 iii) **How** do you think Mom feels now?
 a. Can you pick a face to put on?
 iv) **Why** do you think Mom is feeling this way?

3.

Mixed Emotion
 i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 a. Can you pick a face to put on?
 ii) Why do you think he/she is feeling this way?
 iii) Do you think Mom could be feeling anything else at the same time? Why?
 a. Can you pick a face to put on?

4.

Sequential Emotion
 i) He/She is feeling [X] now.
 a. Do you think this feeling will **change? Why?**
 b. Can you pick a face to put on?
 ii) Mom is feeling [Y] now.
 a. Do you think this feeling will **change? Why?**
Can you pick a face to put on?

5.

i) What could he/she do to make herself feel different?
 ii) What do you think will happen next?

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Mom	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 7: DROPPED OFF at SCHOOL

1. Tell the story, pointing to the characters:

(Slide One): Look, it's almost half-past eight, it's time for school!

(Slide Two): Mom is dropping off the little boy/girl at school.

(Slide Three): And Mom is saying goodbye and leaving him/her there

2.

Face Choice

- i) **How** do you think the little boy/girl feels now?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) **How** do you think Mom feels now?
 - a. Can you pick a face to put on?
- iv) **Why** do you think Mom is feeling this way?

3.

Mixed Emotion

- i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
- ii) Why do you think he/she is feeling this way?
- iii) Do you think Mom could be feeling anything else at the same time? Why?
 - a. Can you pick a face to put on?

4.

Mixed Emotion

- i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
- ii) Why do you think he/she is feeling this way?
- iii) Do you think Mom could be feeling anything else at the same time? Why?
 - a. Can you pick a face to put on?

5.

- i) What could he/she do to make herself feel different?
- ii) What do you think will happen next?

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Mom	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 8: CHILDREN with PAINT

1. Tell the story, pointing to the characters:

(Slide One): This little boy/girl is here working hard and enjoying painting this picture. Another boy/girl is watching.

(Slide Two): Uh-oh, the paint's spilled all over the picture now!

(Slide Three): ...

2.

- Face Choice
- i) **How** do you think the little boy/girl feels now?
 - a. Can you pick a face to put on?
 - ii) **Why** do you think he/she is feeling this way?
 - iii) **How** do you think the other child feels now?
 - a. Can you pick a face to put on?
 - iv) **Why** do you think the other child is feeling this way?

3.

- Mixed Emotion
- i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
 - ii) Why do you think he/she is feeling this way?
 - iii) Do you think the other child could be feeling anything else at the same time? Why?
 - a. Can you pick a face to put on?

4.

- Sequential Emotion
- i) He/She is feeling [X] now.
 - a. Do you think this feeling will **change? Why?**
 - b. Can you pick a face to put on?
 - ii) The other child is feeling [Y] now.
 - a. Do you think this feeling will **change? Why?**
 - Can you pick a face to put on?

5.

- i) What could he/she do to make herself feel different?
- ii) What do you think will happen next?

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child who is painting	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Child who spilled the paint	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 9: DRINKING JUICE

1. Tell the story, pointing to the characters:

(Slide One): This little boy/girl has just been drinking some nice apple juice, but look here, the cupboard is open.

(Slide Two): He/She is going over to get a biscuit to have with the juice, but just then another boy/girl walks into the kitchen.

(Slide Three): Uh-oh, the other boy/girl is drinking the juice...

(Slide Four): And now the little boy/girl has come back but there is no more juice

2.

Face Choice

- i) **How** do you think the little boy/girl feels now?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) **How** do you think the other child feels now?
 - a. Can you pick a face to put on?
- iv) **Why** do you think the other child is feeling this way?

3.

Mixed Emotion

- i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) Do you think the other child could be feeling anything else at the same time? **Why?**
 - a. Can you pick a face to put on?

4.

Sequential Emotion

- i) He/She is feeling [X] now.
 - a. Do you think this feeling will **change? Why?**
 - b. Can you pick a face to put on?
- ii) The other child is feeling [Y] now.
 - a. Do you think this feeling will **change? Why?**
 - Can you pick a face to put on?

5.

- i) What could he/she do to make herself feel different?
- ii) What do you think will happen next?

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child who is painting	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Child who spilled the paint	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 10: TEACHER with BUILDING BLOCKS

1. Tell the story, pointing to the characters:

(Slide One): Look, the teacher has brought some building blocks for these two boys/girls

(Slide Two): This boy/girl is making a tall building, but this other boy/girl is having problems

(Slide Three): The teacher comes to see how the building is going

2.

- Face Choice
- i) **How** do you think the little boy/girl who built smaller feels now?
 - a. Can you pick a face to put on?
 - ii) **Why** do you think he/she is feeling this way?
 - iii) **How** do you think the other child feels now?
 - a. Can you pick a face to put on?
 - iv) **Why** do you think the other child is feeling this way?
 - v) **How** do you think the Teacher feels now?
 - a. Can you pick a face to put on?
 - vi) **Why** do you think the Teacher is feeling this way?

3.

- Mixed Emotion
- i) Do you think the little boy/girl who built smaller could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
 - ii) **Why** do you think he/she is feeling this way?
 - iii) Do you think the other child could be feeling **anything else** at the same time? **Why?**
 - a. Can you pick a face to put on?
 - iv) Do you think the teacher could be feeling **anything else** at the same time? **Why?** **Can you pick a face to put on?**

4.

- Sequential Emotion
- i) The little boy/girl who built smaller is feeling [X] now.
 - a. Do you think this feeling will **change?** **Why?**
 - b. Can you pick a face to put on?
 - ii) The other child is feeling [Y] now.
 - a. Do you think this feeling will **change?** **Why?**
 - b. Can you pick a face to put on?
 - iii) The Teacher is feeling [Z] now.
 - a. Do you think this feeling will **change?** **Why?** Can you pick a face to put on?

5.

- i) **What could he/she do to make herself feel different?**
- ii) **What do you think will happen next?**

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child who built smaller tower	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Other Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Teacher	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 11: PICKED UP at SCHOOL

1. Tell the story, pointing to the characters:

(Slide One): It looks like its time for the school day to end, so everybody is putting on their coat.

(Slide Two): Mom has come to pick up her little boy/girl from school.

(Slide Three): ...

2.

Face Choice

- i) **How** do you think the little boy/girl feels now?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) **How** do you think Mom feels now?
 - a. Can you pick a face to put on?
- iv) **Why** do you think Mom is feeling this way?

3.

Mixed Emotion

- i) Do you think the little boy/girl could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) Do you think Mom could be feeling **anything else** at the same time? **Why?**
 - a. Can you pick a face to put on?

4.

Sequential Emotion

- i) He/She is feeling [X] now.
 - a. Do you think this feeling will **change**? **Why?**
 - b. Can you pick a face to put on?
- ii) Mom is feeling [Y] now.
 - a. Do you think this feeling will **change**? **Why?**
 - b. Can you pick a face to put on?

5.

- i) **What could he/she do to make herself feel different?**
- ii) **What do you think will happen next?**

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Mom	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

Story 12: MARBLES with FRIENDS

1. Tell the story, pointing to the characters:

(Slide One): These two boys/girls are having fun playing marbles together.

(Slide Two): Now another boy/girl has come along with a brand-new ball to play with.

(Slide Three): And these two boys/girls are off to play ball together, leaving this boy/girl by himself

2.

Face Choice

- i) **How** do you think the little boy/girl who is playing marbles feels now?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) **How** do you think the other boy/girl feels now?
 - a. Can you pick a face to put on?
- iv) **Why** do you think the other boy/girl is feeling this way?

3.

Mixed Emotion

- i) Do you think the little boy/girl who is playing marbles could be feeling **anything else** at the same time?
 - a. Can you pick a face to put on?
- ii) **Why** do you think he/she is feeling this way?
- iii) Do you think the other boy/girl could be feeling **anything else** at the same time? **Why?**
 - a. Can you pick a face to put on?

4.

Sequential Emotion

- i) The boy/girl who is playing marbles is feeling [X] now.
 - a. Do you think this feeling will **change**? **Why?**
 - b. Can you pick a face to put on?
- ii) The other boy/girl is feeling [Y] now.
 - a. Do you think this feeling will **change**? **Why?**
 - b. Can you pick a face to put on?

5.

- i) What could he/she do to make herself feel different?
- ii) What do you think will happen next?

6. As the child is speaking, note the face and words he/she uses

Character		1 st Feeling	Mixed Feeling	Sequential Feeling
Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____
Other Child	<i>Word Choice:</i>	_____	_____	_____
	<i>Face Choice:</i>	_____	_____	_____

APPENDIX B



APPENDIX C

Affect Task Scoring Criteria

To be scored on 4-point scales:

1=no evidence, 2=mild evidence, 3=moderate evidence; 4=marked evidence

1. Evidence of being able to rely on mother as a secure base: refers to the parent serving as a figure supporting exploration/learning/play.
2. Evidence of being able to rely on mother as a safe haven: refers to the parent serving as a comforting figure
3. Evidence of being able to rely on father as a secure base.
4. Evidence of being able to rely on father as a safe haven
5. Evidence of support or understanding from peers.
6. Evidence of support or understanding from teacher (in Blocks Story).
7. Acknowledgement of distress (physical and/or emotional)
 - Score most highly when there is clear and compelling reference to the central dilemma. Score 1-2 when the central dilemma facing the character is not alluded to.
 - In bike story, score 3-4 if there is reference to physical hurt or frustration at falling.
 - In puzzle story, score 3-4 if there is evidence of disappointment at father being busy with reading paper.
 - In the separation story, score 3-4 if the character acknowledging sadness at being excluded/left behind.
8. Escalation of conflict dilemma. Score when a conflict is initially introduced for the central character and then is escalated to a more intense level later in the story. Score most highly if the escalation is odd or out of place with the context of the rest of the story.
9. Coping resourcefully; Score at the highest end of this dimension when the speaker clearly elaborates on what one or more central characters are feeling, thinking and doing; does not defensively rely on 'I don't know' responses (score 1 or 2); note that a genuine brief sketch which in some cases be sufficient to score 3 on this 4-point scale. Also score for evidence of hope, optimism, confidence in the Separation Story (e.g. child anticipates being looked after by an alternative caregiver when parents go away; or in puzzle story, child anticipates eventual help from father). Inversion of roles or role reversal (where the child serves as safe haven/secure base TO PARENT) should be scored at '2'.
10. Despair, pessimism, helplessness (e.g. in Separation Story: anticipates being left alone when parents go away, with possible kidnapping, and a need to 'ignore' the parents' absence); pay special attention to the child's 'last word'.
11. Reflective Functioning: The use of, or failure to use, mental state language (beliefs and desires). Look to *economy*, or saying either too much nor too little; *relation*, or staying on task; and *manner*, or

remaining conventionally polite and related with the characters of the story. Score 1 if there is scant evidence that the child thinks either about the motives which guided the characters' behavior about their own actions and responses. Score 2 if there is either a general understanding of human motives or understanding of the motivations guiding child-parent interactions but the conclusions drawn are inaccurate and/or do not distinguish between child and adult thought processes. Score 3-4 if there is an organized and consistent understanding of the conscious (and unconscious) motivations guiding the character's behavior, and of the interdependence of these processes between child and parent/teacher.

12. Mixed emotion understanding; any one character is depicted as feeling more than one emotion in a given circumstance, with full verbal justification for highest score – score based on how the child responds to examiner's probe 'could s/he be feeling anything else' Note if mixed emotion understanding provided unprompted/spontaneously.
13. Sequential emotion understanding; any one character is depicted as feeling differently in response to 'could his/her feelings change?'; score at the highest level only if there is a verbal explanation of this change, at 3 if a change is acknowledged as possible and a new feeling suggested. Lower scores for no mention of another feeling being likely, or a 'don't know' or 'feels the same' reply. Note if sequential emotion understanding provided unprompted/spontaneously.

APPENDIX D

Affect Task Scoring Sheet

Rater's name _____

Subject Name: _____

Date of Testing: _____

To be scored on 4-point scale:

1=no evidence, 2=mild evidence, 3=moderate evidence, 4=marked evidence

Score Supplemental when there is evidence for the criterion in the narrative despite its' absence in the scenario.

	1. Ice	2. Tri c- ycl e	3. Puzz- le	4. Suit- case	5. Dra- wing	6. Coo- kies	8. Paint	9. Juice	10. Bloc-ks	11. Pick- ed	12. Mar- bles
1. Mother as a Secure Base <i>safe haven / secure base</i>											
2. Father as a Secure Base <i>safe haven / secure base</i>											
3. Support from peers											
4. Support from teacher											
5. Acknowledgment of distress											
6. Escalation of conflict											
7. Coping Resourcefully											
8. Despair / Helplessness											
9. Reflective Functioning											
10. Mixed Emotion Understanding											
11. Sequential Emotion Understanding											

Notes: make mention of narrative style or other features of the child's response not captured by above codes

APPENDIX E

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behavior over the last six months or this school year.

Child's name Male/Female
Date of birth.....

	NOT TRUE	SOMEWHAT TRUE	CERTAINLY TRUE
Considerate of other people's feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restless, overactive, cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often complains of headaches, stomach- -aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shares readily with other children, for example toys, treats, pencils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often loses temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rather solitary, prefers to play alone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally well behaved, usually does what adults request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many worries or often seems worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Often fights with other children or bullies them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally liked by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easily distracted, concentration wanders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervous or clingy in new situations, easily Loses confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often lies or cheats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Picked on or bullied by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often offers to help others (parents, teachers other children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinks things out before acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steals from home, school, or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets along better with adults than with other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many fears, easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets along better with adults than with other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signature
Thank you very much for your help

Date
Parent / Teacher / Other (Please specify):

Figure 1: Change over time in Total Difficulties on the SDQ

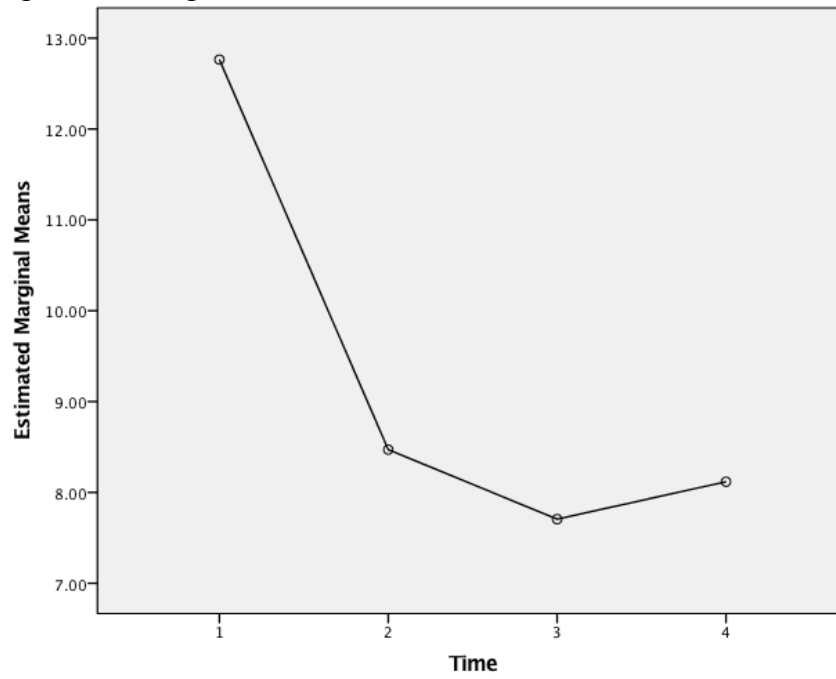


Figure 2: Change over time in Emotional Problems on the SDQ

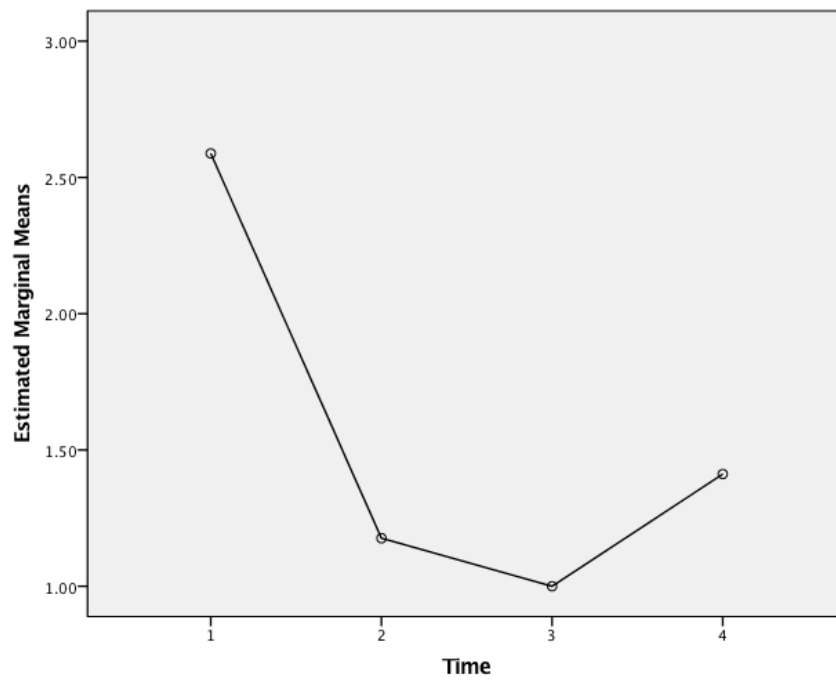


Figure 3: Change over time in Conduct Problems on the SDQ

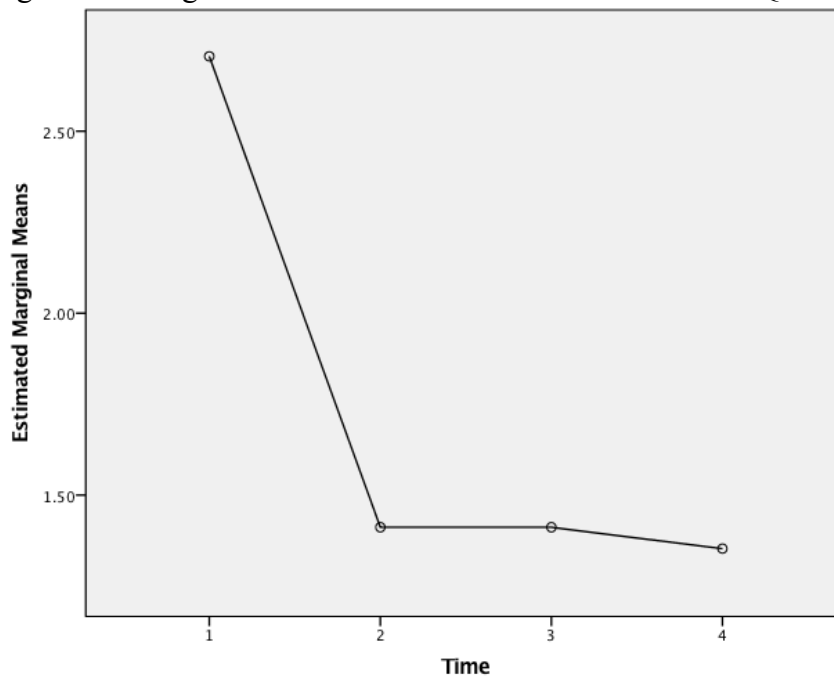


Figure 4: Change over time in Hyperactivity on the SDQ

