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Attachment in Middle Childhood: Progress and Prospects

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Abstract

Contrary to the substantial amount of research on infant, preschool, adolescent, and adult attachment, middle childhood has long been neglected by the international attachment research community. In the past two decades, however, there has been a steep increase in research focusing on middle childhood attachment. This article provides an overview of past research, with a focus on the characteristics of secure versus insecure attachment at this age period, and an understanding of the different approaches to measure attachment. The article demonstrates the relevance of past middle childhood attachment research for both developmental psychologists and clinicians trying to understand the importance of middle childhood in individuals' development across the life span. © 2015 Wiley Periodicals, Inc.

The study of parent–child attachment has been a vibrant area of research. Initially the field focused on the idea that a key development in infancy is the child's opportunity to form a relationship with a caregiver who meets the child's physical and emotional needs (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969). An outcome of protective, sensitive care is that the child comes to use the parent as a secure base from which to explore and as a safe haven in times of stress. The child also develops a cognitive model of the caregiver as supportive and loving and a model of the self as worthy of love. In addition, a secure attachment relationship fosters the development of the child's social and emotional competence as it provides a context for learning about relationships (e.g., how to care for others and be cared for) and self-regulation (e.g., how to regulate emotions, resolve conflicts with peers; Brumariu, Article 3; Moss & Lecompte, Article 5, both this issue) and supports children's exploration of the world (e.g., the ability to benefit from learning at school; Verschueren, Article 6, this issue).

From empirical studies we now know a great deal about factors that promote the development of secure attachment in infancy (e.g., sensitive and responsive care) and its long-term developmental correlates (e.g., positive self-concept, better peer relationships, fewer behavioral problems, and anxiety). Yet Bowlby (1969) argued that attachment is important across the life span. There has been extensive exploration of attachment in adolescence (Allen, 2008). Contrary to developmental chronology, the last developmental period studied by attachment researchers has been middle childhood (Kerns & Brumariu, in press), yet there are important reasons to study attachment at this age. The developmental outline of attachment will be incomplete without studies that identify the key features and correlates of attachment in middle childhood. Studies of attachment in middle childhood have relevance for longitudinal studies of child adaptation, as biological and social developments occurring at this age (e.g., Del Giudice, Article 2, this issue) likely provide the foundation for problems emerging in adolescence (e.g., delinquency, depression). Hence, middle childhood studies on attachment development and its sequelae have proven to have significant theoretical and clinical relevance.

Over the past 15 years, there has been a growing number of studies on middle childhood attachment. This issue provides a timely opportunity to evaluate the state of the field, discussing both what we have learned and gaps in our understanding. In this introductory article, we focus on the features of attachment during the middle childhood years and review measurement approaches. Given the rapid expansion of research on this topic and space concerns, referencing is frequently illustrative rather than exhaustive (see other articles in this issue, and Kerns & Brumariu, in press, for more extensive presentations of individual research findings).

Parent–Child Secure Attachment in Middle Childhood

Main, Kaplan, and Cassidy (1985) proposed that evidence for attachment processes should be identifiable on the levels of observable attachment behavior and of attachment representations. Evidence has been found for both levels in middle childhood research. At the first level, Kerns and Brumariu (in press) identified several defining features that are typical for the attachment behavioral system in middle childhood. First, the goal of the attachment system changes from *proximity* to the attachment figure in early childhood to the *availability* of the attachment figure in middle childhood. This reflects the fact that children are less often in need of parental assistance due to a growth in self-regulation skills. It is still necessary, however, for children to feel they can access the caregiver when needed.

Second, parents remain the primary attachment figures for children in middle childhood. When asked about situations likely to invoke the need for an attachment figure, even 11- to 12-year-old children show a strong preference for parents over peers (e.g., Seibert & Kerns, 2009). Although peers are important members of children's social networks, they generally do not serve as attachment figures (as they begin to do by late adolescence; Allen, 2008). Instead, prematurely relying on peers to fulfill attachment needs is generally associated with poorer developmental outcomes (Allen, 2008). Moreover, research also suggests that some of the conditions that elicit support-seeking behavior (e.g., pain and illness, separation, and anxiety) remain largely the same as in infancy. Interestingly, academic failure and social conflict become important, suggesting that adolescent themes are gradually emerging in this age group (Vandevivere, Braet, & Bosmans, 2015).

Third, there is a shift toward greater coregulation of secure base contact between the child and parent figure with the emergence of a supervisory partnership between the parent and child (Kerns, Aspelmeier, Gentzler, & Grabill, 2001; Waters, Kondo-Ikemura, Posada, & Richters, 1991). By the end of middle childhood, the attachment between parent and child can be viewed as a collaborative alliance whereby the child is still relying on the stronger, wiser parent figure but is also beginning to use the parent as a resource rather than relying on the parent to solve the child's problems (Kerns & Brumariu, in press).

Finally, attachment figures continue to function both as *safe havens* in time of distress as well as *secure bases* that support a child's exploration. They promote a child's confidence in tackling challenges and in experimentation in spite of risk to fail (Heylen et al., 2014). Fathers may be especially likely to function as secure bases that support children's exploration by providing encouragement for exploration (Bretherton, 2010).

At the level of representations, the internal working models of securely attached children in middle childhood consist of a similar secure base script as was found in adults (Psouni & Apetroaia, 2014; Waters, Bosmans,

Vandevivere, Dujardin, & Waters, in press). This cognitive script consists of a causal chain of expected events. The script starts with the expectation that the attachment figure will notice distress or that the child can seek support during distress. Then the attachment figure provides emotional and practical support to alleviate distress, and the child feels supported and returns to normal activities. This script is important because it assimilates information during interactions with parents in line with secure attachment expectations. Children who trust in parents as a secure base will continue to experience trust over time. By contrast, children who lack secure base trust will fluctuate in their trust appraisals over time—for example, after a conflict, their trust decreases (Bosmans, Van de Walle, Goossens, & Ceulemans, 2014).

Middle childhood research shows that this assimilation effect can be explained by trust-related information processing biases. Children who trust less in the availability of their mother interpret maternal behavior in a more negative way, even if the mother's behavior could be interpreted as supportive (De Winter, Salemink, & Bosmans, 2014). Also, less trusting children remember more negative interactions with mother at the expense of remembering positive interactions with her (Dujardin, Bosmans, Braet, & Goossens, 2014). Finally, the attention of insecurely attached children is automatically overly focused on mother, at the expense of exploration and support seeking (Bosmans, Braet, Koster, & De Raedt, 2009; Bosmans, Braet, Heylen, & De Raedt, 2015).

Taken together, middle childhood research at the representational level provides a coherent understanding of the secure base script-related mechanisms that guide children's day-to-day interactions with attachment figures. These findings are promising for at least two reasons. First, they are in line with findings in adolescent and adult attachment research (Dykas & Cassidy, 2011), suggesting developmental consistency from middle childhood to adulthood. Second, they add to adult attachment information processing research by demonstrating the functions of these processes (e.g., they influence support-seeking behavior and stability in attachment expectations). Thus, middle childhood research gradually helps in unraveling one of the most fundamental black boxes in Bowlby's attachment theory (Zimmermann & Iwanski, Article 4, this issue).

This line of research is only emerging, and many challenging questions remain. Most important, research on cognitive schema development suggests that schemas are still under development in childhood and early adolescence, influenced by new experiences. It is only later in adolescence that these schemas become crystallized into a cognitive diathesis that robustly alters individuals' responses to context cues (Allen, 2008). Future research should try to unravel the course of attachment schema development as this might help explain the limited longitudinal stability of attachment (Pinquart, Feußner, & Ahnert, 2013) and the impressive treatment effects obtained after restoring trust in the parent–child dyad (Diamond

et al., 2010). Finally, an intriguing question could be whether information processing biases affect the ability of insecurely attached adolescents and adults to provide a coherent (i.e., internally consistent, realistic, and appropriately elaborated) discourse of their attachment experiences.

These studies also raise the question of which factors contribute to the development and maintenance of secure attachment in middle childhood. The literature with younger children has documented that a caregiver's provision of responsive, sensitive care and a warm emotional climate is related to secure attachment (Ainsworth et al., 1978). In middle childhood, studies show that responsive, warm care remains related to secure attachment (e.g., Kerns, Brumariu, & Seibert, 2011; Moss, St.-Laurent, Dubois-Comtois, & Cyr, 2005; Scott, Riskman, Woolgar, Humayun, & O'Connor, 2011). In contrast to infancy, in middle childhood, children are beginning to assert more autonomy. Thus, sensitive care at this age also seems to involve allowing them to express their own feelings and opinions (Kerns et al., 2011).

In addition to environmental influences, biological factors might start influencing attachment development in middle childhood (see also Del Giudice, Article 2, this issue). Compared to infancy, parent–child relationships might be more shaped by the complex dynamics of gene–environment interactions, suggesting larger effects of genetic variation on attachment (in)security at older ages. For example, onset of middle childhood can be considered a biological switch that increases children's awareness of (gender-related) social dynamics, leading to the accelerated development of secure base scripts (e.g., Del Giudice, Article 2, this issue).

Insecure Attachment Patterns in Middle Childhood

Although we have a rather clear developmental outline of secure attachment in middle childhood and what changes from early childhood onward, we know less about the distinctive features of insecure attachment patterns at this age. Avoidant attachment emerges when parents have been rejecting of children's bids for care and contact. Avoidantly attached children may become overly self-reliant and fail to seek care as a way to maintain a relationship with a rejecting caregiver. Ambivalent attachment (also called preoccupied attachment) develops when children have experienced inconsistent care and thus become chronically uncertain about the availability of caregivers. Their uncertainty leads them to focus on their attachment figures and to frequently engage in attachment behaviors as a strategy to maintain their caregiver's attention and involvement. Disorganized attachment is thought to develop when children lack access to a reliable and responsive attachment figure due to the experience of harsh parental care or a psychologically unavailable caregiver (e.g., parent is overwhelmed and distracted). As a consequence, the child lacks a stronger, wiser attachment figure and responds either by failing to develop any consistent strategy toward the caregiver or by taking control of the relationship (role reversal).

Research on specific insecure attachment patterns in middle childhood (see Brumariu, Article 3; Moss & Lecompte, Article 5, both this issue) has been guided primarily by work on the manifestation of insecure patterns in younger children, with relatively little attention to age changes in insecure attachment patterns. There has been discussion of changes in disorganized attachment, in that the controlling type is thought to emerge in middle childhood (Moss et al., 2005), but there has been little consideration of developmental transformations for the avoidant or ambivalent patterns. An exception is the speculations by Hans, Bernstein, and Sims (2000) regarding the ambivalent pattern. Although they acknowledge that ambivalent children will continue to show exaggerated displays of negative emotion as a way to elicit care, they argue that a new manifestation in middle childhood is that ambivalent children might begin to provoke caregivers and initiate conflict as another way to engage with an inconsistently available caregiver. For avoidant children, diminished communication may be a distinguishing feature, with the exception that parents and children might continue to communicate about child accomplishments (e.g., school achievements). Thompson and Raikes (2003) suggested that the field should be open to the possibility that new forms of insecure attachment may emerge at older ages. A direction for future research would be studies that focus on identifying age-related changes in the insecure attachment patterns. A challenge in doing so, however, is the lack of clear conceptualization of how different insecure patterns might change across development. Thus, there is a need in future work to develop and test expanded theorizing about insecure patterns and how they may change in middle childhood (see also Del Giudice, Article 2, this issue) as well as how they are related to children's adaptation (see Articles 2–6).

Middle Childhood Attachment Research: Methodological Challenges for Attachment Research and Theory

Attachment research at other ages often developed a preference for specific measurement approaches. Infant attachment is preferentially measured through observation of parent–child interactions (e.g., the Strange Situation Procedure [SSP]; Ainsworth et al., 1978). In the preschool years, both behavioral observation and narrative techniques such as story stems (Bretherton, Ridgeway, & Cassidy, 1990) have been used. In adolescence and adulthood, attachment is measured through autobiographical interviews (e.g., the Adolescent/Adult Attachment Interview; Main et al., 1985) or questionnaires (e.g., the Experiences of Close Relationships questionnaire; Brenning, Soenens, Braet, & Bosmans, 2012). In middle childhood, a large number of methods and specific measures have been developed to assess attachment, and there is no dominant measurement approach.

The broad variety of attachment measures likely reflects the fact that middle childhood was the last period studied, and many of the available

measures were adapted from measures that were used in both earlier and later developmental periods (Kerns & Seibert, in press). Our expanding research experience shows that middle childhood is a developmental period that challenges the assumptions underlying the measures that were developed for other developmental periods. Compared to younger ages, short separations from mother no longer elicit distress or the immediate need for proximity and reassurance (Main & Cassidy, 1988), which makes it difficult to develop behavioral measures of attachment that rely on separation–reunion procedures, although behavioral observation techniques have been developed to assess attachment in 6- to 8-year-olds (e.g., Bureau & Moss, 2010; Easterbrooks, Bureau, & Lyons-Ruth, 2012). Compared to older ages, there are more concerns that children could be somewhat limited in their capacity to reflect on their relationships, as is required by attachment autobiographical interviews.

Driven by these developmental concerns, initial middle childhood attachment research (particularly on children over 8 years of age) mainly focused on two types of representational measures of attachment: questionnaires (e.g., Kerns et al., 1996, 2001) and narrative storytelling assessments (e.g., Bureau & Moss, 2010; Granot & Mayseless, 2001; Kerns, Tomich, Aspelmeier, & Contreras, 2000). Most used and best validated is the Security Scale (SS; Kerns et al., 1996). Other questionnaires followed (e.g., a child version of the Inventory of Parent and Peer Attachment, Ridenour, Greenberg, & Cook, 2006; a child version of the Experiences of Close Relationships Revised, Brenning et al., 2012), but all had high correlations with the original SS ($rs > .60$, Bosmans, Braet, Soenens, & Verschueren, 2008; Brenning et al., 2012). However, while designing the SS, the authors were wary of possible validity concerns related to hypothesized difficulties to consciously access internal working models through self-report and related to risk for response bias and social desirability (Kerns et al., 1996). This led the authors to suggest that alternative measures should also be used to study middle childhood attachment.

In response to this suggestion, a first movement toward developing alternative measures was the adaptation of Bretherton et al.'s (1990) story stem procedure (e.g., Granot & Mayseless, 2001). Story stems provide children with initial story prompts that introduce a problem (e.g., child is hurt or upset). Children are provided physical props (dolls and other items), and asked to show and tell what happens next in the story. The story coding takes into account how the parent figure is portrayed, how emotions are regulated, how problems are addressed, and the coherence in children's narratives. Story stem procedures have been used successfully in several studies. For example, children who tell secure stories show better adaptation at school and with peers (Granot & Mayseless, 2001), are more successful at regulating their emotions (Brumariu, Article 3, this issue), and experience more accepting and less psychologically controlling parenting and fewer internalizing problems (Kerns et al., 2011).

In recent years, more translational and creative work has been done to design alternative tests to measure middle childhood attachment. Many of these measures are still based on analyzing attachment narratives. Middle childhood versions of the Adult Attachment Interview have been developed based on the assumption that children may be able to report about recent experiences with caregivers, with less securely attached children reporting less accepting experiences with attachment figures and failing to narrate coherently on their attachment relationships (the Friends and Family Interview [FFI], Kriss, Steele, & Steele, 2012; the Child Attachment Interview [CAI], Borelli et al., 2010; Shmueli-Goetz, Target, Fonagy, & Datta, 2008). Although these techniques are promising, there is a need for further validation, especially in relation to parenting and to other measures of attachment. Most recently, middle childhood versions of the Secure Base Script Assessment test have been developed to identify which children recognize secure base script information in a verbal prompt outline (Psouni & Apetroaia, 2014; Waters et al., in press). In this procedure, children are presented with a word list and asked to tell a story using the words. A securely attached child will recognize the implied secure base script and tell a story in which a problem emerges that is solved through the intervention of the mother with a positive resolution to the situation. There are also efforts under way to develop observational coding systems for 9- to 12-year-olds that can be used to code attachment patterns. Unlike observational approaches for 6- to 8-year-old children that are based on separation–reunion procedures (Bureau & Moss, 2010; Easterbrooks et al., 2012), approaches with older children are based on observations of mother–child interaction when dyads are engaging in challenging conversations (Brumariu, Kerns, Bureau, & Lyons-Ruth, 2013). In another approach to observed behavior, Bosmans et al. (2015) found that insecurely attached children waited longer to call for mother's support when failing to solve a puzzle they had been told that peers managed to solve. Finally, Bosmans and colleagues (e.g., Bosmans et al., 2009) pioneered the use of performance-based measures of attachment that assess attachment through cognitive information processing (e.g., patterns of attention to the mother under stress). For most of these newer middle childhood attachment measures, much validation work is left to do (Kerns & Seibert, in press).

Although all these measures have contributed to the contemporary knowledge base of middle childhood attachment, the discussion is ongoing regarding which can be considered the gold standard measure for middle childhood attachment. In addition, there are questions regarding how highly attachment measures that use different approaches "should" be correlated and which available measures would be best to use to validate new approaches. A difficulty is that most studies in middle childhood (as found in the larger attachment literature) only use a single measure of attachment (for exceptions, see Bureau & Moss, 2010; Kerns et al., 2000, 2011; Psouni & Apetroaia, 2014). This discussion is also fueled by longitudinal

studies showing, for example, that infant maternal sensitivity is more strongly linked with adolescent narrative attachment measures than to adolescent self-report attachment measures (Steele et al., 2014).

Building on our experience of using a variety of measurement strategies, we propose a perspective shift in the discussion. We argue that the main question should not be "Which is the golden standard measure?" but rather "Which component or aspect of the attachment construct is measured?" Our argumentation is in line with current insights in other research areas. For example, in depression research, the consensus is increasingly reached that different measures of depression tap into different layers of the construct and do not necessarily need to correlate highly but rather need to be combined to get a more comprehensive understanding (Hankin, 2012). Applying such reasoning to attachment research requires asking what different attachment measures have in common and in what way might they be unique or specific.

Regarding the common core of attachment measures, Waters and Cummings (2000) argue that the secure base construct is the key to capturing attachment. Consequently, we would argue that all attachment measures should reflect whether individuals have the capacity to organize their interpersonal experiences and behavior to use a figure as a safe haven and secure base. Regarding the differences between separate attachment measures, dual process theory (e.g., Gawronski & Creighton, 2013) seems a promising theoretical framework that might reveal characteristics of each measure that are relevant to attachment theory.

According to dual process theory, measures differ to the extent that they tap into strategic or automatic processes. Measures of strategic processes, such as self-report measures, allow individuals to influence outcomes. Thus they give insight into the aspect of the attachment construct children are aware of and that reflects the way children want to present their attachment representations both to themselves and others. In middle childhood, measuring strategic processes could be especially valuable as children at this age tend to be concrete thinkers. Thus they may be more likely than adolescents to report actual experiences. In addition, in comparison to preschoolers, children in middle childhood may be better able to compare their experiences with those of others and thus have a more realistic view of their relationships (Stipek & Mac Iver, 1989). Measures of automatic processes focus on outcomes beyond an individual's strategic control (e.g., a child cannot decide whether to recount autobiographical memories in a coherent way or to focus attention more strongly to mother). Important to note here is that automatic versus strategic control reflects a dimensional difference and that all measures differ to the extent that they are more automatic or more strategic (Moors & De Houwer, 2006).

This conceptualization leads us to propose a simplified model for comparing measures of attachment in middle childhood (see Figure 1.1). Important in this figure is the fact that all measurement strategies have unique

Figure 1.1. Model of Measurement Approaches to Attachment in Middle Childhood
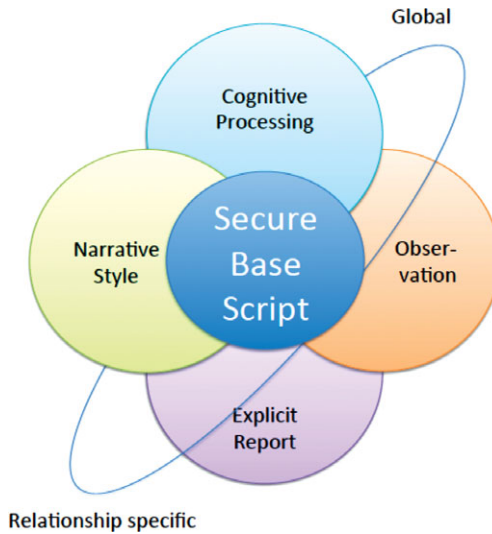
variance, but they all share a connection with the underlying secure base script. Although the model does not capture all aspects of attachment measurement, it does capture the fact that different approaches vary not only in the target of assessment (narrative style, cognitive information processing, observation, explicit report), but also vary on whether attachment is characterized as a quality of a particular relationship (e.g., father–child) or as a more general characteristic of the child.

Our conceptualization of the variation in attachment measures has significant implications for our understanding of attachment research in middle childhood and likely other ages. Most important, implied in dual process theory is the assumption that measures of strategic and automatic processes do not necessarily have to correlate or even should not correlate (Moors & De Houwer, 2006). This implication argues against the idea that there is only one gold standard approach to measure attachment and that lack of correlations between attachment measures is an indication that at least one of these measures is not attachment related. Instead, each measure might provide insight into specific components and mechanisms of the attachment system. Finally, this implication suggests that combining measures of both automatic and strategic attachment processes will provide a more comprehensive understanding of attachment-related outcomes.

Consequently, we believe that combining different measurement strategies should be the way forward for future attachment research. Currently,

researchers from one research tradition tend to argue against findings revealed within other research traditions, believing in the supremacy of one measurement strategy. This occurs despite the fact that different measurement strategies show striking similarities in the processes uncovered (e.g., similar heightening and deactivation of emotions strategies have been found in observation and self-report research, Brenning et al., 2012; Brumariu, Article 3, this issue). Instead, our proposal is to use a comprehensive approach on attachment research measures in research.

Concluding Remarks

Middle childhood attachment research has provided an exciting new view on the mechanisms underlying longitudinal attachment development and the impact of attachment on children's resilience and vulnerabilities. We now know that in middle childhood, interactions with parents increasingly develop into secure base scripts and expectations that allow children to explore their social world with the certainty that their parents will not only provide care when needed but will also support exploration. Further, insecurely attached children's emerging maladaptive emotion regulation strategies and cognitive biases put them at risk of developing social difficulties or psychopathology. These findings also call for the development of treatment strategies focusing specifically on restoring middle childhood attachment relationships. The research presented in this issue should be considered a valuable knowledge base, enabling the design of such treatment strategies. Finally, this introduction also showed the challenges of operationalizing attachment in middle childhood. Future attachment research might benefit from developing a coherent and conceptually sound framework to understand the specific meaning of different attachment measures. This article has taken a first step toward developing such a framework by applying dual process theory to attachment measures. Although some preliminary studies show that combining measures of strategic and automatic processes provide a more subtle and improved understanding of attachment-related outcomes (Bosmans, Koster, Vandevivere, Braet, & De Raedt, 2013), more research is now needed to investigate this framework.

With these insights, middle childhood attachment research can inform clinical practice. For example, classical cognitive-behavioral therapy treatment programs focus on the acquisition of emotion regulation skills. Adding programs that focus on improving parenting skills have shown limited utility, and an approach focused on restoring attachment ruptures may be more fruitful. Moreover, this research suggests that it is possible to enhance children's developmental outcomes by creating a context with supportive and responsive partners like teachers and peers who may be able to provide support in the absence of parental attachment figures (Seibert & Kerns, 2009; Verschueren, Article 6, this issue).

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