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# Attachment-Based Intervention and Prevention Programs for Young Children

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## Introduction

Bowlby's attachment theory is a theory of both psychopathology and normal socio-emotional development. It is based on the idea that the early relationship that develops between the infant and caregiver provides the foundation for later development. Bowlby's theory attempts to explain how the early relationship contributes to psychological well-being or later psychopathology. The term attachment is used to describe the affective bond that develops between an infant and caregiver.[1,2] Attachment is not a characteristic of the infant, nor is it a characteristic of the caregiver. Rather, it is a pattern of emotional and behavioural interaction that develops over time as the infant and caregiver interact, particularly in the context of the infant's needs and bids for attention and comfort.

Through repeated interactions with the same adults, an infant begins to recognize caregivers and to anticipate the behaviour of the primary caregiver, usually the mother. Bowlby described the infant as biologically predisposed to use the caregiver as a haven of safety, or a secure base, while exploring the environment.[1] So an infant who feels threatened will turn to the caregiver for

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protection and comfort. The caregiver's responses to such bids help mould the attachment relationship into a pattern of interaction that develops over time. By the end of the first year of life, the history of the relationship between infant and caregiver allows the infant to begin to anticipate the caregiver's response to her bids for comfort, and to act in accordance with those expectations.

Another tenet of attachment theory is that from these first relationships, infants form mental representations of the self, others and the relationship between self and other. Bowlby called these representations inner working models.[1] As the infant develops and encounters the world beyond that first relationship, the inner working model guides her behaviour and expectations in subsequent relationships as well.

Mothers who are sensitive and comforting when the infant makes bids for comfort will have infants who continue to seek out the mother when distressed, and will be calmed by contact with the mother. The infant's inner working model will lead her to see others as reliable and compassionate, and herself as worthy of this kind of attention. This pattern has been labelled secure.[1,2]

In contrast, if the caregiver has been unavailable or only erratically available or insensitive or rejecting when the infant has sought contact, the infant will learn not to seek contact when distressed or to seek comfort only in an ambivalent manner, as strong bids might alienate an already unreliable caregiver. The inner working model of this infant will lead her to see others as untrustworthy and potentially rejecting, and herself as not deserving reliable, sensitive care. These patterns have been labelled insecure.[1,2] Insecure attachment patterns have been further specified into two patterns: avoidant attachment and resistant (or ambivalent) attachment. In addition, some infants are classified as disorganized/disoriented with regard to attachment because they do not seem able to resort to a single, organized attachment pattern in the face of threat or stress. Instead, they become disoriented or resort to conflicting behaviour strategies.

**Subject: Attachment and Later Development**

Research has demonstrated that security of attachment during infancy predicts aspects of social development during childhood and adolescence, such as empathy,[3,4,5] social competence[5,6,7,8,9] and behaviour problems,[10,11,12] with secure attachment predicting more optimal developmental outcomes and insecure attachment predicting behaviour and relationship difficulties. We have

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also found a secure attachment to be a major protective factor for children who function in a competent fashion even in the face of adversity.[13] In addition, attachment relationships may have long-term effects on functioning by influencing the course of biological development, including brain development.[14]

Inner working models are carried forward from infancy throughout the life course and, as noted above, they influence the individual's expectations and behaviour in relationships, including parenting in the next generation. Using the Adult Attachment Interview (AAI),[15] a number of studies have demonstrated that parent attachment organization is related to infant attachment patterns. Parents with secure organizations are likely to have infants who are securely attached with them, and parents with insecure organizations are likely to have infants who are insecurely attached with them.[16,17]

Because of the many positive outcomes associated with a secure attachment, the implications are clear. Design (and evaluate) prevention and intervention programs to promote a secure parent-infant attachment relationship in order to improve developmental outcomes of infants and children who are at risk for poor developmental outcomes and prevent behaviour problems and psychopathology.

**Problems: Attachment-Based Prevention and Intervention Programs**

Attachment relationships, like all other aspects of development, do not exist in isolation from their context. As note d above, caregivers who respond to their infant's needs and cues in a sensitive fashion are likely to develop a secure attachment relationship with their infant. There are many personal (e.g., mother's depression) and interpersonal (e.g., violent relationship with spouse) factors that may make it more difficult for the caregiver to respond to the infant in a sensitive and emotionally responsive fashion. In addition, a host of environmental factors, such as chaotic living conditions, may interfere with the developing attachment relationship, particularly when intervening with families from high-risk populations who face multiple personal and environmental challenges. Many programs were not equipped to deal with the problems of high-risk families.

**Research Context: Results of Attachment Interventions**

In 1995, van Ijzendoorn et al.[18] conducted a review of 12 attachment interventions, and in 2000, Egeland and colleagues[19] found a few more programs that had been implemented and evaluated.

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In 2003, the Dutch investigators conducted another meta-analysis that included 29 investigations designed to enhance attachment security. More recently, there has been an increase of attachment-based prevention and intervention programs.[20]

Mountain et al.[21] conducted a systematic review and meta analysis to determine the effectiveness of early intervention for improving attachment security. They found that early intervention resulted in a secure attachment and improved parental sensitivity. These findings replicate findings of a previous review and meta analysis.[20]

There are basically two broad types of intervention programs designed to enhance the quality of mother-infant attachment: (1) those that endeavour to help the parents become more sensitive to infant cues; and (2) those that attempt to change parents' representations of how they were cared for by their own parents. Many of the attachment interventions fall into one of these two categories, while others combine the two approaches and still others, such as Beckwith's[22] program emphasizing social support.

**Key Research Question**

Since a secure parent-infant attachment relationship is associated with positive developmental outcomes and has been found to be a protective factor in the face of adversity, it behooves us to develop, implement and evaluate attachment-based intervention/prevention programs. There are many research questions that remain to be answered, particularly having to do with the long-term cost-benefits associated with attachment-based prevention programs. In addition, researchers need to determine who is most likely to benefit from particular program approaches and strategies.

**Recent Research Results**

Several interventions conducted in the Netherlands have been successful in their attempts to improve mother's sensitivity to infant's cues. Van den Boom[23] randomly assigned 100 irritable infants and their mothers to treatment and control and found that those in the treatment group were more sensitive and had more securely attached mother-infant pairs compared to control dyads. The aim of this home-based intervention was to enhance parental sensitivity. The intervention consisted of only three sessions and positive outcomes were found at 24- and 42-month follow-ups. Using a similar approach with adopted infants and their adoptive parents, Juffer et al.[24,25] also obtained positive findings.

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In a more recent investigation, van Zeijl and colleagues[26] used the video feedback procedure with a group of 1- to 3-year-old children who had high levels of externalizing behaviour. The intervention was effective in decreasing overactive, oppositional, and aggressive behaviour compared to the control group. Later analyses of these data by Bakermans-Kranenburg and colleagues[27] indicated that genetic differences moderated the effects of intervention. Children with a certain genotype on the dopamine receptor gene showed the largest decrease of externalizing behaviour in the cases where parents showed the largest increase in the use of positive discipline. Findings that children's susceptibility to changes in their environment depends in part on genetic differences are very provocative and hopefully will lead to more gene by environment studies in the area of prevention and intervention in the early years.

The results of evaluations of programs designed to alter parents' cognitive representations have yielded many positive findings, but few have obtained significant differences between treatment and control on attachment classifications. Lieberman et al.[28] identified a group of anxiously attached infants from high-risk families. They, like most investigators attempting to alter inner working models, used an infant-parent psychotherapy approach. The focus of the once-a-week home visits was on responding to the affective experience of the mother and child, both as reported by the mother and as observed through mother-child interactions. The intervenor attempted to clarify the mother's affective experiences and feelings toward her toddler and toward the intervenor. They found significant differences between intervention and control groups in maternal empathy, goal-corrected partnership behaviour, child avoidance and child anger towards mother, with the intervention group showing optimal behaviours on each of these variables. Using a similar approach, Toth and colleagues[29] found a higher rate of secure attachment for children of depressed mothers who were in the toddler-parent psychotherapy group compared to those in the randomly-assigned control group.

Project STEEP (Steps Toward Effective Enjoyable Parenting) is a comprehensive program designed to change inner working models and enhance maternal sensitivity.[30] The approach involved home visits and group sessions beginning prenatally and continuing for two years. The program resulted in many positive outcomes. For example, mothers in the STEEP program were more sensitive, had a better understanding of infant development and lower depression and anxiety scores, were more competent in managing their family affairs and had a larger social support network compared to control mothers.

**Conclusions**

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The positive long-term developmental outcome associated with a secure parent-infant attachment relationship provides an excellent rationale for implementing attachment-based prevention programs early in life. Recognizing the significance of this early relationship, however, has not resulted in a large number of attachment-based interventions. A variety of early parent education and home visitation programs exist, but very few have as their primary goal facilitating the development of a secure attachment relationship. The results of the evaluation of existing attachment-based interventions are encouraging, particularly the Dutch studies involving relatively low-risk samples. Based on the findings of the Dutch studies, it appears that attachment-based interventions that focus on enhancing sensitivity are likely to be successful with parents who are motivated to learn ways of responding with their difficult infants. For more high-risk families, it appears that more comprehensive, long-term interventions are necessary.

## Implications

Based on attachment theory and research, as well as results from evaluations of existing attachment-based interventions, it would be recommended to incorporate attachment-based intervention/prevention programs into existing home visitation and parent education programs for high-risk families of young children, as well as investigate new approaches for changing parents' cognitive representation of their attachment with their parents. Much is known about parent-child interaction, parental characteristics and beliefs, and contextual factors that are antecedents of a secure attachment relationship. This knowledge needs to be applied in the development of the next generation of attachment interventions. The needs and strengths of high-risk families are highly varied. Intervention programs must be designed to meet the unique needs of each family as well as to take advantage of their strengths.

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