The role of secure attachment as a protective factor for vulnerable infants

Nicola Atwool

Children begin their lives entirely dependent on adults for survival. Bowlby (1969) believed that attachment behaviour was biological in origin, designed to elicit caring responses from adults. These responses, however, contribute far more than simply ensuring infants' physical survival. The quality of children's relationships provides the framework for the exponential development and learning that occurs in the early years. Attachment experiences lay the foundation for the child's perception of self, others and the world around them. Attachment is not limited, however, to the early years, and adult capacity to respond to their infant's vulnerability is strongly influenced by their own early experiences.

In this article I outline the significance of attachment, demonstrating the link with brain development and resilience, and describing the way in which children's vulnerability is influenced by their attachment experiences. I also describe the way in which patterns of attachment may be transmitted from one generation to the next and the implications of this when assessing vulnerability in a social work context.

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Attachment theory

Attachment theory originated from John Bowlby's seminal work in the 1940s and was further developed by Mary Ainsworth. In recent years there has been a resurgence of interest, and a wealth of information is now available. Attachment research focuses on the relationship between the infant and the caregiver rather than the individual characteristics of either party (Ainsworth & Bowlby, 1991), and highlights the infant's active participation in the process. The attachment figure has a crucial role in managing anxiety during the infant's period of complete dependency. By developing 'sensitive responsiveness,' or the ability to tune into the infant and respond appropriately, s/he helps the infant to form a secure attachment. Once established, secure attachment provides the child with a base from which to explore the world (Ainsworth, 1979).

From her study of mother–infant dyads, Ainsworth identified three patterns of attachment: secure, ambivalent and avoidant. Additional categories have since been identified.

Crittenden (1988) describes an avoidant/ ambivalent pattern and Main, Kaplan and Cassidy (1985) use the term "disorganised/ disoriented" to describe children in "at-risk" samples who initially were categorised as secure because their responses did not fit the other two categories. There appears to be general agreement that this fourth category emerges in high-risk populations and is most likely to occur in abusive situations.

Internal working models

Bowlby's concept of internal working models explains the long-term impact of early attachment experiences (Bowlby 1969, 1973, 1980). These models are constructed from the infant's experience of interaction and Sroufe (1988, p. 18) argues that:

> "Such models concerning the availability of others and, in turn, the self as worthy or unworthy of care, provide a basic context for subsequent transactions with the environment, most particularly social relationships."

Internal working models form the basis for the organisation and understanding of affective experience (Bretherton, 1985, 1990; Crittenden, 1990; Main et al, 1985), helping to make sense of new experiences and shaping subjective reality (Howe, 1995). Internal working models have a strong propensity for stability, but they are not rigid templates. There is evidence that during childhood internal working models may only be altered in response to changes in relationship experience. Following the onset of the capacity for formal operational thinking, internal working models may be altered through the ability to think about and reflect on relationship experiences.

Attachment and brain development

More recently, research has focused on the link between attachment and brain development furthering understanding of the significance of attachment. During the first three years of life, the brain develops rapidly, establishing neural pathways that allow the more complex structures of the brain to come into being (Schore, 2001). This brain development is sequential and use-dependent. Different areas of the central nervous system are in the process of organisation at different times and disruptions of experience-dependent neurochemical signals during these periods may lead to major abnormalities or deficits in neurodevelopment (Perry, 1997, 1997a). The role of the environment is crucial and Perry and Pollard (1998) identify the primary caregiver as the major provider of the environmental cues necessary to this development.

Siegel (2001, p. 85) argues that the key element in attaining complex brain development:

> "is the combination of differentiation (component parts being distinct and well-developed in their own uniqueness) with integration (clustering into a functional whole)."

He argues that human relationships involve these elements of differentiation and integration and, by doing so, nurture the development of these complex states in the brain. Seigel (2001 pp. 85–86) maintains that:

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"Within secure attachments, such self-organisation may be seen as the gift that caregivers offer to their children: to enable the self to achieve differentiation and integration in acquiring flexible and adaptive means for self-regulation."

Schore (2001) emphasises the link between attachment and the development of self-regulation. He maintains that exposure to the primary caregiver's regulatory capacities facilitates the infant's adaptive ability. The brain is unable to develop without the ability to approach, tolerate and incorporate new experiences. The attachment behavioural system provides the framework within which the child can explore and manage potentially stressful new experiences. Schore argues that when severe difficulties arise in the attachment relationship, the brain becomes inefficient at regulating affective states and coping with stress, and that this engenders maladaptive infant health. Stress arises with asynchrony between caregiver and infant, and sustained stress compromises development.

Fonagy (2003) adds yet another dimension, arguing that attachment provides the context for the infant to develop a sensitivity to self-states that facilitates the development of the reflective function. This function is a vital component of effective interpersonal communication. Fonagy argues that it is only by experiencing the primary caregiver's empathic expression of the infant's inferred affective state that s/he acquires an understanding of his/her internal state. In the first year, the infant only has a primary awareness of emotional states. Through the process of psychobiological feedback, functional connections are established

that allow the infant to infer the emotional state of another and to link emotional states with actions. At the final level of awareness, the individual is able to reflect on internal states without the direct link to action. Fonagy maintains that this facilitates the development of the interpersonal interpretive mechanism essential to the ability to function in close interpersonal relationships. He argues that it is attachment's role in facilitating this development, rather than attachment per se, that is important.

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A complex picture emerges of attachment relationships providing the context for the development of internal working models that are far more than cognitive maps. They incorporate the capacity for self-regulation, the ability to identify and reflect on internal states of self and others, mental representations of self and others, and strategies for managing relationship experiences based on those mental representations. Depending on the attachment experience, these individual capacities vary. The degree to which they are integrated within the individual also varies.

Internal working models and patterns of attachment

Ainsworth's original three categories of attachment and later additions represent internal working models. The secure pattern provides the context for optimal development. The consistent sensitive responsiveness of the primary attachment figure facilitates the development of an internal working model in which the self is perceived as worthy, others are perceived to be reliable and available, and the environment is experienced as challenging but manageable with support. The attachment

figure provides a stable base that facilitates the exploration of the environment so crucial to early brain development. When faced with threat, the infant is able to respond with both affect and cognition in order to elicit a supportive and timely response. Neural integration is promoted allowing flexible and complex networks to develop. The child achieves balance and mastery is the primary strategy when confronted with new situations. The secure child acquires an understanding of the mind, and has the capacity to reflect on the internal state of self and others. Adolescents with a history of secure attachment present as confident, outgoing, and able to access support when necessary (Allen & Land, 1999). Adults with a secure internal working model have been characterised as secure and autonomous (Hesse, 1999).

The two insecure categories represent the infant's capacity to adapt to a less than optimal environment. Bowlby uses the concept of defensive exclusion to explain the strategies adopted by the infant in these situations. Some information is suppressed in order to achieve the goal of maintaining proximity with an attachment figure that is not always available or is actively rejecting.

The avoidant pattern develops in the context of an unresponsive and rejecting relationship with the attachment figure. The self is perceived as unworthy and others are seen to be unavailable and hurtful. Due to the lack of consistent support in stressful situations, the environment is experienced as threatening. The infant has to become self-reliant at a much earlier stage and learns to shut down attachment behaviour in order to protect the self from repeated

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experiences of rejection. Affective responses become deactivated and over-regulated, while cognitive strategies are amplified. Children in the avoidant category continue to develop cognitively and may use play as a means of diverting attention. The affective component is, however, not integrated and may be defensively repressed. Consequently, the dominant approach is pragmatic problem-solving. Relationships are not regarded as important, although there may be underlying anger and resentment. Control is the dominant strategy. The reflective function is impaired and the mental state of others is likely to be shunned. Avoidant adolescents present as sullen and withdrawn with intermittent outbursts of rage. Peer relationships tend to be superficial and aggressive behaviour may be triggered in close relationships because past experience has taught them that you cannot trust others, especially those close to you (Allen & Land, 1999). Adults with this pattern of attachment have been characterised as dismissive, placing little value on relationships (Hesse, 1999).

The ambivalent/resistant pattern develops in response to inconsistent, unreliable and at times intrusive responses from the attachment figure. There is uncertainty about the worthiness of the self. Others are perceived to be unreliable, over-bearing and insensitive, and the environment is experienced as unpredictable and chaotic. Cognitive responses become deactivated because they are experienced as ineffective due to the inconsistent response of the caregiver. Affective responses are amplified and under-regulated in an attempt to maintain proximity with the attachment figure. Exploration is inhibited, increasing the likelihood that cognitive aspects

of brain development may be impaired. Affective dominance means that self-regulation is not achieved. Helplessness and resentment come to characterise children in this category. Manipulation is the dominant strategy.

There is likely to be a heightened focus on the internal state of the self, with impaired capacity to reflect on the internal state of the other. By adolescence, those with a history of ambivalent/resistant attachment are likely to be engaged in intense and explosive relationships with attachment figures. They may desperately want relationships with peers and significant others but fear rejection and may drive others away (Allen & Land, 1999). Adults with this pattern remain preoccupied with relationships often enmeshed in ongoing conflict (Hesse, 1999).

Children who develop atypical patterns have most often been exposed to neglect and abuse. They face the daunting task of maintaining proximity to a parent who is the source of threat. The avoidant and ambivalent/resistant strategies are adaptive to the extent that they enable the child to maintain the proximity of the primary caregiver, thereby accessing support in dealing with stressful situations. Although there is some disagreement about the extent to which the atypical patterns are adaptive, there is agreement that some children do not develop consistent adaptive strategies.

The primary caregivers of children in this category are described as frightening or frightened (Main et al, 1985). In abusive situations, the self is perceived to be unworthy and others are perceived as frightening and dangerous. When the primary caregiver is frightened, the self is perceived to be unworthy and others are seen to be helpless. In both situations the environment is experienced as dangerous and chaotic. Hyper-arousal characterises these children, impairing cognitive development. Affective responses are likely to dominate and there are deeply conflicting emotions. The lack of consistent response and patterned experience significantly impacts on development. The infant is fearful and reactive. Exploration is inhibited and children in this category may not develop a capacity for symbolic play.

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Some children in this group may later develop compulsive compliance, compulsive caregiving or controlling behaviour. Survival is the dominant strategy. Their capacity to reflect on their own internal state is limited and they may lack the ability to identify feeling states. They are hyper-vigilant of caregiver cues and the internal state of others. Their reflective capacity is, however, significantly impaired by this lack of balance. Research indicates that significant problems in childhood and later life are most frequently linked with this pattern. By adolescence, significantly increased rates of psychopathology and violent crime have been found in longitudinal studies of infants classified as disorganised in infancy (Allen, Hauser & Bormen-Spurrell, 1996; Carlson, 1998; Lyons-Ruth, 1996; Rosenstein & Horowitz, 1996; van Ijzendoorn, 1997). In adulthood, this pattern has been described as unresolved/disorganised (Hesse, 1999).

Attachment and resilience

Longitudinal research has demonstrated that children 'at risk' do not all fare badly (Werner

& Smith, 1982) and similar findings have resulted from research exploring biological, developmental and environmental risk factors (Garmezy, 1994; Garmezy, Masten & Tellegren, 1984; Haggerty, Sherrod, Garmezy & Rutter, 1994; Rutter, 1981). Resilient children have been found to have an easy temperament, high self-esteem, an internal locus of control and a sense of autonomy. They have a supportive family environment and a supportive person or agency outside the family (Brown & Rhodes, 1991; Compas, 1987; Garmezy, 1994).

More recently, an international research project across ten communities in seven different countries has identified the importance of cultural connection (Ungar, 2003, 2005). In New Zealand we tend to think of culture as relevant for minority groups but it is also important to think about the cultural aspects of mainstream children's experience, especially in terms of the extent to which different cultural groups create a sense of belonging. The most resilient children and young people have access to all four components (individual characteristics, family support, community support and cultural belonging) but any one can make a difference. It is clear that resilience is not an isolated individual characteristic and it is difficult to see how any of these protective factors could be acquired outside the context of secure and consistent attachment.

A secure internal working model encompasses all of the factors that contribute to resilience. In the face of adversity, the secure child has internal resources and an expectation that significant adults will be available and responsive. This allows them to elicit support.

The avoidant and ambivalent patterns are adaptive and demonstrate a degree of resilience in less than optimal circumstances, allowing children to manage relationships and emotions. They will, however, find it difficult to access external support because their expectation is that adults are unavailable or unreliable. Those children with a disorganised attachment pattern are the most vulnerable, lacking a coherent strategy for managing relationships, feelings or experience. This pattern develops in the context of trauma and adversity. Subsequent negative experiences only serve to confirm their experience of themselves as unworthy, adults as hurtful, and the world as a dangerous place. It is almost impossible to access support in such circumstances.

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Continuity of attachment patterns

There is evidence of both continuity and discontinuity in patterns of attachment over time. Some have argued that the lack of continuity indicates that the relevance of attachment to later development has been overstated (Lewis, Feiring & Rosenthal, 2000). The small number of studies and differences in a number of variables, including time over which stability has been assessed, sample size, socio-demographic characteristics, age range and the degree to which environmental change was measured, further complicates the picture. It is hardly surprising that the results are not uniform. Of perhaps greater significance is that to a large extent the results confirm Bowlby's emphasis on the all-important role of real world experiences and his assertion that internal working models are open to change (Waters, Hamilton & Weinfield et al, 2000). Despite the different

results, there appears to be a growing consensus that the relationship between early attachment experiences and later development is complex (Thompson, 1999). Internal working models are constantly revised and updated in the light of new experiences. Although there is a propensity for stability, research clearly demonstrates that significant change can occur.

Intergenerational transmission of attachment patterns

Processes by which attachment patterns may be transmitted across generations have been identified (Fraiberg, Adelson & Shapiro, 1980; Main & Goldwyn, 1984; Ricks, 1985) and a link between unresolved attachment issues in parents and the abuse of children established (Call, 1984; Fraiberg et al, 1980; Main & Goldwyn, 1984; Schmidt & Eldridge, 1986). Main et al. (1985) investigated the relationship between security of attachment during infancy and both the child's and the parent's mental representations of attachment five years later. They found strong stability in the child's apparent security on reunion with the mother over the five-year period and a weaker but significant stability with the father. The adult attachment interview confirmed that the parent's representation of their history shaped the way in which the infant was conceptualised and treated.

Main et al suggest that because parents' internal working models shape their response to the infant, parents with insecure attachment histories may restrict or reorganise attachment-relevant information about their child's behaviour in terms of their own working models. The infant's internal working model then develops in response to these experiences and in this way inter-generational transmission occurs. Negative outcomes are not inevitable. With access to coherent, organised information about their own attachment, parents who have experienced rejection or trauma, including losing attachment figures, are able to experience security in adulthood and foster secure attachment in their children.

Conclusion

Secure attachment acts as a protective factor for both infants and parents. I have focused on the long-term impact for children but secure attachment also protects parents when they are tired and stressed, enabling them to empathise with a distressed child and resist the impulse to lash out. An understanding of the dynamics of attachment is central to understanding vulnerability because the focus is on the two-way interaction between infants and their parents.

Attachment provides the key to success for parents, caregivers and children, providing the glue that holds families together and makes them safe (Atwool, 2005). Early intervention when there are difficulties has a significantly greater chance of success. The arrival of a child may provide a window of opportunity, stimulating parents with difficulties to engage in the work necessary to address attachment issues arising from earlier negative experience. Referral to specialists for an attachment assessment is strongly recommended in cases where social workers are intervening in families with vulnerable infants. Such assessments can provide information about the quality of

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attachment relationships and the capability of the parent to engage in the work necessary to address difficulties.

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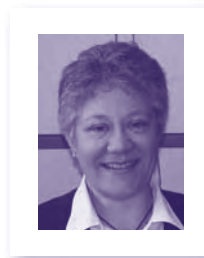
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