ATTACHMENT THEORY: REARCH AND APPLICATION TO PRACTICE AND POLICY

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Abstract
Attachment is a key aspect of early human development. It refers to the close bond a child has to his/her parents or carers, which serves the purpose of helping a child feel safe, and comforted when worried or anxious. A great deal of research has been undertaken to understand how attachment develops, what factors influence the extent to which a child forms a secure or insecure attachment relationship to a caregiver, what this might mean for later outcomes and how attachment difficulties might be treated or prevented. This chapter provides an overview of research in this field and discusses the implications of this work for clinical practice and policy.

Attachment

Attachment refers to the tendency of infants and young children to turn to parent figures for comfort and support when frightened, stressed or ill. It is thought to have been shaped by natural selection to ensure that young children survive in the face of a range of threats, such as predation, injury or illness. The field grew out of ground-breaking integrative theoretical work by John Bowlby [1] and by the work of Mary Ainsworth [2] who put the topic on a sound empirical footing by developing several key tools for studying attachment in humans, most notably the Strange Situation Procedure ([2].

When we think about the term attachment, it is important to distinguish between attachment *behaviour* and an attachment *bond*. An attachment bond is not immediately apparent, but we infer it when we observe, over a period time, a consistent tendency that a child has to discriminate certain key individuals, to whom they direct their attachment *behaviour*. Attachment behaviour is an immediate and directly observable series of actions that children (and indeed adults in different forms) display when they are anxious or uncertain, whose purpose appears to be organised around bringing about contact with a caregiver for comfort or support [3].

The kinds of behaviours that children may display when they seek to make contact with their carer in this way are very diverse, but broadly speaking they fall into three main types: 1) signalling or communication (e.g. calling, crying), 2) proximity seeking (e.g. crawling, walking, reaching) and contact maintenance (e.g. clinging). Children also keep track of their attachment figures, and, especially as they get older, will monitor how available their parent is from moment to moment (physical or psychologically available). The ways in which children manifest their attachment behaviours changes enormously with age, but what remains quite consistent is the purpose they serve – feeling safe through making contact. In older children language – often at a distance – is a very important way in which children may achieve contact and feel comforted, whereas young children rely much more heavily on physical contact [see 4].

Bowlby argued that throughout the course of routine experiences with carers, children develop expectations about how they will be responded to by carers, and these expectations form a kind of working model that guides how and when they should deploy their attachment behaviour. These working models are thought to be quite stable over time, and shape how children behave both within their primary attachment relationships and in other important relationship later in life. Crucially, Bowlby argued that these models also form the basis of a child's developing sense of themselves and of the world – whether they are worthy of care from others, and whether others are caring or benign, or rejecting and hostile. This is a central concept that attachment researchers have used to understand how attachment may influence children's functioning in relationships in later life and how attachment in early life might affect children's chances of experiences social and emotional difficulties or disorders.

It is important to note that the processes that lead to the establishment of a long-term attachment bond (i.e, forming an attachment) are quite different to those that trigger attachment behaviour [5]. This is an important issue because some forms of difficulty in related to attachment seem to be linked to formation of attachment bonds (or the breaking of

them), while others are linked to the way in which attachment behaviour is expressed within an already formed and continuous bond. Attachment Disorders, for example, which are described further below, are most likely examples of the former, whereas insecure attachment is better understood as the latter. The level of clinical concern associated with these two domains of attachment problem are quite different, and strategies to prevent or treat them will also be quite different.

Measurement

Normative Patterns
The Strange Situation Procedure is the most commonly used tool for studying attachment [2]. It involves an encounter with a stranger and two brief separations from a parent in an unfamiliar setting. The procedure us valid for infants aged approximately 11-18 months. In a now classic and well established manner, infants vary in striking ways in how they respond to this procedure, particularly the way their attachment behaviour is organised when they are reunited with their carer. These divide into two broad classifications – 'secure' and three types of 'insecure' attachment: avoidant, resistant and disorganized. These classifications have become a major focus of research, with findings indicating that the majority of infants in low risk circumstances (approximately 65%) are described as 'secure'; approximately 15% as Avoidant; 10% as Resistant and 15% as Disorganized. It is this latter category that has attracted the most attention clinically, as it appears most closely related to more severe forms of adverse parental care, and to raised risk of psychopathology [6]. The prevalence of the different insecure subtypes varies considerably across cultures [see 7]. A host of similar measures have been developed for assessing attachment in older children [8].

Causes of Attachment Security and Insecurity

Based on many hours of intensive home-based observation of young infants and their mothers, Mary Ainsworth originally proposed that the extent to which the parent was sensitive and responsive to the infant's attachment cues was the key factor in influencing whether a child developed a secure or insecure attachment [2]. Since then, this theory has been supported by an impressive collection of cross-sectional and longitudinal studies [9]. However, although this association has be replicated many times the size of the association is not large, which suggests that there is more that we need to understand about the factors that influence attachment security and insecurity, either in the way it is measured, or in the kinds of behaviours involved, or both [10]. Notably, randomized controlled trials of clinical interventions designed to improve sensitive parenting have been shown to increase the likelihood of secure attachment, suggesting the association is more than correlation – it reflects a causal process [10]. While sensitivity of parenting may be thought of as the most important immediate determinant of attachment security, a host of broader contextual factors also appear to be consistently associated with security and insecurity, including parental depression, social support, marital quality and poverty [11]. Importantly, evidence indicates that genetic factors play a quite limited role in the development of attachment in infants and preschoolers [e.g. 12], though it may be more important in adolescence [13].

Disorganized attachment appears to be related to rather different features of parenting than the other insecure attachment categories. The starkest example of this concerns maltreatment, which has been found to be related to markedly higher rates of disorganized attachment [14]. Furthermore, in populations where rates of maltreatment are likely to be low, insensitive parenting appears not to be closely related to disorganization [14]. Instead, a quite different set of parenting features has been implicated, representing behaviour that has been described as frightened/frightening or extremely insensitive [15].

Attachment Disorders

Although insecure attachment, and particularly Disorganized attachment, is associated with a raised risk of later poor adjustment, the risk is relatively weak and probabilistic [17]. Insecure attachment patterns should therefore not be considered intrinsically problematic, and are not considered disorders. More severe problems in the area of attachment that could be described as disorders have been identified however, and these are almost exclusively observed in conditions of highly adverse care, such as abuse, neglect or institutional care. There are two types of disorder relevant to attachment. The first is known as Reactive Attachment Disorder (RAD) in the DSM-5 (previously called RAD-inhibited-sub-type in DSM-IV). RAD is marked by a striking absence of attachment behaviour towards carers, extreme withdrawal, unexplained emotional volatility (e.g., fearfulness, anger) even during non-threatening interactions, a pervasive tendency not to seek comfort from carers when distressed, and a lack of social responsiveness or reciprocity. The second disorder is known as Disinhibited Social Engagement Disorder (DSED), which was previously referred to as RAD-disinhibited subtype. DSED is marked by indiscriminate social approach behaviour, lack of sensitivity to social/personal boundaries (e.g., non-normative physical contact or intimacy with strangers), over-friendliness and a lack of wariness of strangers (e.g. wandering off with strangers). DSED is no longer considered an attachment disorder within DSM-5, because evidence indicates that disinhibited behaviour can co-occur with otherwise seemingly normal attachment behaviour (sometimes even of the secure type) towards caregivers [18]. Nevertheless, there is probably a close connection between attachment and the lack of selectivity of approach towards adults observed in DSED, and this is a topic that continues to be debated among scholars and clinicians [19].

It is important to note that RAD and DSED are quite distinct from the normative patterns of attachment described in the previous section, both in terms of the behaviours that define them and the circumstances that appear to give rise to them. Existing evidence suggests that normative attachment patterns represent variations in the organization of attachment related to the style or quality of parenting among children who have formed one or more selective attachment bonds. In contrast, RAD and DSED most likely represent the consequences of severe disruption in the continuity of an attachment bond, or the failure to establish a selective attachment bond in the first place [6].

Later outcomes linked to early attachment

The question of whether and how early attachment insecurity is associated with, or might cause, later difficulties with social and emotional adjustment has been a very significant area of research with obvious potential policy implications [20-23]. When considered together,

and synthesised using meta-analysis, the findings of these studies provide some important indications regarding the scope and limits of the impact of attachment on socio-emotional development. The evidence indicates, for example, that attachment security is more strongly correlated with childhood social competence and externalizing behaviour problems (e.g., aggression) than with internalizing problems (like anxiety) [20,22,23]. This evidence appears broadly consistent with the idea early attachment is linked most closely to children's functioning in social relationships (given that many externalizing problems in childhood reflect difficulties with peer relationships). Another remarkable finding from this work is that the effects of attachment do not appear to decline over time – associations remained the same in all these outcomes regardless of the age at which they were measured or the length of the gap between the assessment of attachment and outcome (which varied widely). Thus, the evidence broadly supports the idea that secure attachment is associated with better socio-emotional outcomes, at least in childhood, but also highlights the fact that the effects of attachment are not large and deterministic, and that there is specificity in the insecure subtypes associated with different outcomes.

Intervention

A host of studies has attempted to promote early childhood outcomes by supporting parents or carers to increase their sensitivity and responsiveness to a child's attachment cues and thereby, in principle at least, improve security of attachment. In the majority of these studies, the focus has been on prevention, and promoting attachment security as a way enhancing children's resilience and reducing the risk for later emotional or behavioural problems. Other intervention studies have targeted groups where attachment problems are clinically identified or are likely to be significantly in need of intervention– for instance, children who have experienced maltreatment and may be in foster care, or late-placed national or international adoptees.

Preventive interventions

One very strong example of a successful preventive intervention was developed by Van Den Boom [24]. Van Den Boom, on the basis of observational studies, noted a range of insensitive parenting behaviours that often arise when infants are highly irritable and difficult to care for. These behaviours (e.g., overly intrusive, or disengaging when the infant becomes irritable) then formed the targets of her intervention. One hundred highly irritable neonates were allocated at random to the intervention or a control group. Home visits to mothers and infants in the treatment group focused on maternal interaction skills, helping mothers to follow the infant's lead, respond appropriately to their cues, encouraging soothing when the infant was distressed, and increasing playful interactions. Large positive effects on maternal sensitivity, and infant attachment security, were found and these were maintained at a 3.5-year follow-up. Another very popular and effective approach is to use video-feedback to help parents and carers to tune into their infants' or young children's attachment cues and communications [25]. A meta-analysis of a wide range of attachment-focused interventions [26] showed that these were most effective when they were short (less than 16 sessions in length), focused clearly on sensitivity as defined by Ainsworth, and began after age 6 months. Two very important further points emerged from this analysis. First, interventions tended to

be successful in relation to attachment outcomes if they had been successful in improving parental sensitivity – so getting that first step right, so to speak, is crucial. Second, interventions were also more successful when the population that was offered support had a large percentage of insecure infants. In other words, the impact is greater when the 'room to move'—from insecurity to security—is large; the implication is that targeted, rather than universal, prevention may be the most effective and cost-effective approach. Sensitivity-based interventions have also been shown to be at least partially effective in reducing Disorganization [27].

Interventions with fostered, adopted and maltreated children

Several intervention packages have been developed that are specially designed to support attachment in the context of foster care, adoption and maltreatment. The Attachment and Biobehavioural Catch-Up (ABC) program is a 10-session intervention, which includes video-feedback techniques, and addresses mutual processes between parent and child that may interfere, directly or indirectly, with the child's self-regulatory capacities and attachment. These include parental interaction skills; parental attributions; and how the carer's on childhood history may contribute to current parenting attitudes and behaviour. This approach has been found to improve attachment behaviour and normalize stress patterns as indicated by the hormone cortisol [see 30]. Similar programmes have been developed to reduce Disorganized attachment among children who have been maltreated [28, 29], and these appear to be quite effective. For example, Moss and colleagues (29) developed an 8-session video-feedback program for preschool children who had experienced maltreatment or neglect (but remained with their parents). The intervenors, who had been trained in attachment theory and research, visited families in their home and supported families in enhancing the quality of their interactions with the child (i.e., promoting sensitivity), as well as supporting families manage day-to-day challenges and stressors. The intervenors made extensive use of video-feedback to highlight positive interactions and explore parents' thoughts and feelings about those interactions, as well as set goals with parents for between-session activities and plan future sessions. Post-treatment, the authors found substantial benefits for the treated group compared to the control group (to which participating families were allocated at random). More than 40% of the treatment group changed from insecure to secure, compared to only 15% in the control group. A recent NICE guideline [30] specifically recommended video-feedback programmes and sensitivity training as evidence-based interventions for promoting attachment security among children in care or on the edge of care (having experienced, or being at high risk of experiencing, maltreatment). This guideline is likely to have a substantial impact on practice over the coming years.

Conclusion

Attachment theory, and the research it has given rise to, has been extremely important for understanding the developmental significance of early caregiving experiences for children's emotional and social adjustment. This body of theory and research has been used to considerable positive effect to develop focused and effective interventions to increase resilience and to support children with attachment difficulties. More research and clinical innovation is still needed, however, to test whether and how attachment interventions can

have sustained effects on children's long-term adjustment, to identify which children benefit most from such interventions and to refine and improve interventions to maximise benefits and to address a wider range of family circumstances. Developing interventions that are specifically designed to tackle disorganization, and even more urgently, to treat reactive attachment disorder are high priorities for future research. Crucially, much more work needs to be done, both in terms of research and policy, to make such interventions widely available to families within routine health and social care systems.

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