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Attachment Theory and Reactive Attachment Disorder: Implications for Child Welfare and Social Work Practice

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Abstract

Childhood abuse is a pervasive issue in the United States, with the child welfare system increasingly strained by the complex needs of affected children. The social work profession has been at the forefront of child welfare interventions since the emergence of the Charity Organization Societies in the late 1800s. Social work practice requires a strong theoretical foundation to guide evidence-based interventions focused on child abuse prevention and treatment. Attachment theory, first introduced by John Bowlby in the mid-20th century, has evolved significantly over the years, incorporating insights from emotion regulation theories, developmental psychopathology, neuroscience, and trauma-informed frameworks. This article examines the development of attachment theory and its relevance for understanding disrupted attachment in children exposed to maltreatment, including the under-researched condition of reactive attachment disorder. While substantial evidence suggests that early neglect and abuse are associated with elevated rates of psychological diagnoses across the lifespan, research specifically examining reactive attachment disorder and effective treatment approaches remains limited. Important findings from research on institutionalized children reveal serious disturbances of attachment and highlight attachment-based interventions that promote recovery, including deinstitutionalization, foster care, and adoption. Attachment theory remains a critical lens in child welfare and social work practice, centering early relational bonds and prioritizing stable, supportive relationships for children impacted by trauma.

Keywords: Mental Health, Childhood Trauma, Child Welfare, International Adoption, Foster Care, Theory, Social Work Practice

Introduction

In the United States, studies show that an estimated 558,899 children were victims of child abuse and neglect in 2022, with neglect being the most common form of maltreatment. To respond to the child abuse crisis, social workers require evidence-based interventions grounded in a strong theoretical foundation. Attachment theory is one of the most influential frameworks on child development, revealing how the relationship between a caregiver and child is critical in the emotional regulation and psychological health throughout the child's life [1]. Attachment theory explains how a child's need for nurturing, maintained proximity, and protection are required to create a secure attachment [2-4]. Securely attached children feel confident to explore their surroundings, develop an internalized sense of the care they have received, and regulate their emotional state [5]. The theory's emphasis on the impact of early bonding has been widely accepted and has far reaching implications for the child welfare system, social work practice, and policy [6, 7]. This paper aims to summarize the origins and principles of attachment theory, explore its relevance to challenging disorders such as reactive attachment disorder, and present implications for child welfare and social work practice.

Origins of Attachment Theory

Attachment theory originated with John Bowlby, a British child psychiatrist who was trained in psychoanalysis. In 1950, Bowlby was appointed by the World Health Organization to study the needs of homeless children in Europe following World War II. Through this work, he observed that poor maternal care had an adverse influence on the development of children and that children who were separated from their mothers showed marked psychological distress [3]. At the time, leading psychoanalysts theorized that the close bond formed between the child and their mother was based on the mother's ability to feed her dependent child. Bowlby disagreed with this widely accepted view. In the 1960s, his emerging attachment theory shifted the dependency paradigm of the mother-child dyad to one that focused on maternal nurturing, proximity, and comfort. Bowlby's theory continued to diverge from traditional psychoanalysis as his research findings connected a child's misbehavior to environmental influences like the attachment behaviors of the mother. This explanation directly contradicted the Freudian theory of Bowlby's professor, Melanie Klein, who claimed a child's negative behavior stemmed from "fantasies generated from internal conflict between aggressive and libidinal drives" [8].

Mary Ainsworth, a Canadian developmental psychologist who worked with Bowlby in the 1950s, conducted empirical studies of

attachment behavior in Uganda and the United States. Ainsworth viewed attachment as a secure base from which to explore [9]. She created the Strange Situation Procedure to study differences in infant attachment patterns and classified three distinct patterns: secure, insecure avoidant, and insecure ambivalent [10]. Ainsworth found that maternal sensitivity to an infant's signals played a critical role in the attachment process and in the emotional regulation of the child [8]. Ainsworth's research supported Bowlby's emphasis on the nurturing aspect of the mother-child dyad and was published in 1969, the same year Bowlby published his first volume of the *Attachment and Loss* trilogy.

In the 1970s, several of Mary Ainsworth's graduate students at John's Hopkins University published works on attachment theory, including Mary Main. Main, a clinical psychologist at the University of California Berkley, became a leading attachment theorist in the 1980s and 1990s and continues to influence the field today. Along with colleague and husband Erik Hesse, Main studied the attachment classification system proposed by her predecessor and introduced a fourth attachment type that carries much clinical significance: disorganized attachment [11]. Main and Hesse's research [11] revealed that disorganized attachment is most correlated with psychopathology. Disorganized attachment stems from a caregiver who, rather than being an infant's source of safety when distressed, is the source of alarm or fear. The infant's paradoxical experience of having a desire for proximity from the parent as well as the desire to flee are activated simultaneously. Main and Hesse theorized that such negative behavior from a caregiver may result from unresolved experiences of trauma from their own past [11, 12]. Main's widely cited Berkeley Social Development Study led to the development of the Adult Attachment Interview (AAI) and revealed that attachment patterns are passed down through generations [13]. The Berkley Social Development Study has been described as the most influential study of intergenerational patterns of attachment of its era [14].

Clinical psychologist Allan Schore, along with Judith Schore, a clinical social worker, integrated recent neuroscience evidence with Bowlby's original attachment theory to create an interdisciplinary model of attachment. This view of human development connects relational transactions within the mother-infant dyad to the biological brain systems that manage affect regulation [15]. Empirical findings from neuroscience research of the 1990s led researchers to adapt Bowlby's original attachment theory into a modern regulation theory [15]. The theory asserts that early attachment relationships set the foundation for human experiences throughout life and clarifies their role in emotional regulation. The psychobiological attunement of the mother during the earliest stage of a child's life impacts the developing brain's regulatory systems. Systems of brain circuits originally shaped and co-regulated by the mother's attachment behaviors develop the child's sense of self and the ability to regulate emotion throughout life.

Principles of Attachment Theory

Rooted in psychoanalytic theory, attachment theory suggests that infants have an intrinsic drive to form a close bond with their caregiver starting in the first moments of life [16]. Attachment behaviors organized in the infant during the first year are designed to elicit caregiver proximity in order to receive food, protection, and comfort [17]. Bowlby [3] believed that the drive for attachment was the result of an evolutionary process that would increase chances of survival in the face of danger. Thus, any separation from the caretaker would be protested by the infant in order to regain proximity and protection [18].

Attachment bonds form when the caregiver fulfills the infant's physiological need for closeness and physical contact [19]. For example, as infants focus on their parent's voice, hold their parent's gaze during feedings, and look to them for cues when faced with something new, the attachment process is strengthened [16]. Attachment theory distinguishes between attachment behaviors and the attachment bond. While an attachment behavior is an infant's *behavior* that draws their caregiver near such as smiling and cooing, the attachment *bond* is the relationship to the mother as interpreted through the lens of the infant that persists over time [3].

Attachment sensitivities are key environmental determinants in a child's life [20], influencing social relationships [21], psychosocial development, and aptitude [9, 15, 22-24] across the lifespan. Internalized experiences of safety and security felt as an infant help the child develop an Internal Working Model (IWM) which serves as a self-regulating system over time [5]. IWMs develop regardless of whether the mother-child attachment patterns are positive or negative [25]. Repeated attachment behaviors between the caregiver and child are incorporated as representations of self, forming the IWM and laying the foundation for future relationships in life [26]. Secure attachment positively affects the ability to regulate emotions and communication in relationships during childhood and adulthood [1, 15, 26, 27].

The first years of life are the most important in the attachment process [17]. Newborns recognize their mother's scent and voice, yet do not demonstrate a preference for a certain caretaker to meet their needs. From months 2 to 7, infants become socially aware and begin to engage with both familiar and unfamiliar adults. Selective attachment begins to form in infancy around 7 to 9 months of age, when the child becomes reticent with strangers and protests when removed from known caregivers [17]. Around this time, the infant begins to demonstrate a preference for certain adults. Because attachment develops over time and through repeated interaction, there seems to be a limit to infants' capacities to thrive with a high number of caretakers [28]. For example, institutionalized children often show limited preference for their caregivers [17] and significantly lower attachment security compared with children raised in family environments [29]. Attachment theory suggests that by around 12 months old, the quality of attachment between a child and their preferred caretaker can be assessed.

Mary Ainsworth's influential Strange Situation Procedure was designed to categorize infant-caregiver attachment patterns in children between 11 and 20 months old. In this experiment, Ainsworth observed an infant's response to an attachment figure being separated and reunited with the child with a stranger present, and then leaving the room, at various times. Attachment behaviors such as proximity seeking, exploring, and signaling were recorded to assess the pattern of attachment between the infant and their caretaker. Attachment patterns that emerged from the Strange Situation Procedure research have been connected to caretaker behaviors and child responses [5]. Ainsworth, and later Main, classified the patterns of attachment as: secure, insecure avoidant, insecure ambivalent, and disorganized [10, 11]. The Strange Situation Procedure has been replicated in many cultures throughout the world and, despite some variability in distributions, the same four patterns are found [17, 26]. These attachment patterns form a child's understanding of self and others, serving as filters through which to view social interactions [7].

Secure attachment develops from an IWM of a caregiver who is sensitive and meets their child's needs on a consistent basis. This is done verbally by communicating and acknowledging the child's feelings, and non-verbally through facial expressions and body language that convey receptivity [5, 20]. A securely attached child feels the comfort and responsiveness of their mother or caregiver [10]. Secure parents tend to repair disruptions in attunement with their child in order to reestablish the trusting relationship. A strong mother-child attachment bond is shown to serve as a protective factor, providing psychological strength, an internal sense of safety, emotional regulation, and overall improved mental health [20].

In times of stress, children who are securely attached overcome adversities more quickly and are more likely to experience positive emotional states [30]. Securely attached children demonstrate greater confidence exploring their environment due to an internalized sense of safety [30]. A meta-analytic review of 72 studies concluded that more securely attached children exhibited greater positive affect, cognitive and social coping strategies, and emotion regulation [31]. Brain circuits that are created and strengthened during the mother-child attachment process [32] and emerge postnatally [33] play a crucial role in empathy, self-awareness, interpersonal functioning, and nonverbal communication [15]. Emerging research demonstrates a significant relationship between caregiver sensitivity and healthy brain development, with higher maternal and paternal caregiving behaviors being associated with greater gray matter volume and total brain volume [34].

Attachment insecurity has long been recognized to contribute to psychopathology, from more mild affectivity disorders to severe personality disorders. Children with insecure attachments operate with IWMs marked with uncertainty around whether their needs will be met. Caregivers who respond to their child inconsistently can create significant distress for their children. To draw out their caregiver's help, children may amplify their emotions, becoming clingy and prone to separation anxiety, as in the insecure-ambivalent pattern, or shut down and mute their reactions, anticipating rejection, as in the insecure-avoidant attachment pattern [5].

Children who exhibit disorganized attachments demonstrate higher levels of psychological distress [24]. Because they are uncertain about what causes their caregiver to meet their needs, they may display disoriented patterns of behavior. The feeling of wanting and fearing their parent creates confusing and disorganized states [5]. Research from Main and Hesse [11] links fear of the caregiver as the central experience in disorganized attachment. Although Internal Working Models can shift across development, insecure and disorganized attachment patterns tend to remain the most resistant to change [5]. Early descriptions of insecure and disorganized attachment patterns in children who suffered from poor maternal relationships, separations, or a period of institutionalization led to the formulation of a diagnosis for attachment disorders. Bowlby's team at the Tavistock Clinic documented children who struggled with typical social and emotional behaviors, displayed shallow affect, and who were indiscriminately close with unfamiliar adults. These observations later shaped the criteria introduced in the DSM-III in 1980 known as, "Reactive Attachment Disorder of Infancy or Early Childhood [1]."

Attachment Theory and Reactive Attachment Disorder

A child who develops reactive attachment disorder (RAD) has been influenced by severe pathogenic care [6, 24] where a caregiver-child bond is established through fear, the child is abandoned, or there is extreme deprivation early in life [35, 36]. This condition is understood to interfere with core experiences of self, leading to disruptions in consciousness, physiological functioning, behavior, and overall development [37].

The Diagnostic and Statistical Manual 5th Edition [38] classifies reactive attachment disorder as a trauma and stressor related condition of early childhood caused by social neglect or maltreatment. Affected children have difficulty forming emotional connections with adults and other children and often avoid physical closeness with caregivers. Operating from a state of fight, flight, or freeze, they often tend to exert strong control over their environment, exhibit abrupt or inconsistent mood changes, and may act aggressively when attempting to be consoled by an adult [35]. Children with RAD have learned from an early age that they cannot depend on their caregivers and develop "survival skills" throughout childhood to meet their individual needs. These behaviors may include lying, stealing, aggression, manipulation, and indiscriminately approaching unfamiliar adults for help [21, 35].

In the Strange Situation Protocol, children with RAD were most closely linked with the "unclassifiable" (U) attachment pattern, displaying little attachment behavior of any kind and hardly noticing when their mothers left the room in the research session [37]. Main and Solomon's research [39] categorized disorganized attachment behaviors as follows:

1. Sequential display of contradictory behavior
2. Simultaneous display of contradictory behavior
3. Misdirected, incomplete movements
4. Stereotypical behaviors, anomalous postures
5. Freezing or stilling for a substantial period of time
6. Direct apprehension regarding the parent
7. Disoriented behaviours, in particular immediately on the parent's return.

The mental health and foster care communities have long recognized the psychological difficulties presented by children with RAD. Psychopathology is related to the disruptions in the connections and functions of attachment [40, 41]. While evidence has shown an increased incidence of RAD among children with abuse histories, emerging research reveals that neglect and caregiving deprivation in early development may be more strongly associated with RAD than abuse [42-45]. Although there is a paucity of research addressing the neurobiology of RAD [40], adults who have suffered extreme trauma have been shown to have abnormalities in neural networks [46, 47]. Children diagnosed with RAD had significantly higher values of white matter in the brain demonstrating disrupted neurobiological circuits that regulate emotion and social information processing [48]. These neurological changes predominantly disrupt front-limbic brain regions involved in emotional and behavioral regulation [46]. A recent meta-analysis using functional magnetic resonance imaging (fMRI) to assess children with trauma histories revealed brain activity changes associated with cognitive processing, emotional and social domains, avoidance, and memory [49]. Although the reversibility of neurological impacts following extreme trauma is unclear, there is a growing body of literature focused on neuroplasticity, or the brain's ability to form new neural connections [50, 51]. Trauma-informed interventions targeting key neural circuits demonstrate the brain's capacity for adaptation. These findings have important research and practice implications for supporting children who have experienced abuse and neglect.

Reactive attachment disorder is one of the most underdiagnosed [42] and under-researched [52] psychiatric disorders. Evidence reveals elevated symptoms of RAD and/or disinhibited social engagement disorder (DSED) among children in out-of-home placements [1, 36, 53-55] with an estimated 40% of institutionalized children showing symptoms consistent with RAD [17]. The degree of abuse and neglect experienced by institutionalized children may influence the appearance of RAD [17]. However, it remains unclear which factors increase the likelihood that a child exposed to the DSM-defined criterion of severely insufficient care will develop RAD, as some children in the same institutional environment do not exhibit symptoms. Individual differences, including resilience factors among maltreated children, is an area for future research.

Román et al [41] examined attachment-related outcomes among children adopted from Russian institutions into families in Spain compared with maltreated children living in Spanish residential care. A group of Spanish children with no history of contact with child protective services was used as a comparison group. Their findings provide empirical evidence that early adversity in institutional or residential out-of-home settings is associated with elevated levels

of RAD and DSED symptoms. Notably, the severity and duration of early insufficient care as well as the caregiving context play a significant role in shaping attachment-related outcomes. Children adopted into stable, nurturing families showed substantial recovery of attachment-related symptoms over three years, whereas children who remained in institutional settings experienced worsening outcomes. Bruce et al (2018) found that children removed from their families due to pathogenic care (N=100) who were later placed in foster care showed modest improvement in RAD symptoms after 12 months with supportive families. However, caregiver-reported symptoms did not demonstrate comparable improvement. These findings suggest that children may require more than one year with stable caregivers to demonstrate meaningful changes in symptoms.

The Bucharest Early Intervention Project (BEIP) was the first randomized clinical trial looking at institutionalization versus foster care in abandoned children, and one of the only longitudinal studies that has followed the course of RAD [56]. Institutionalized Romanian children (N=187) who were 6 to 30 months old at initial assessment were randomly placed into foster care or continued with care as usual at the institution. A foster care system of 56 homes was established by the researchers as none existed at the time in Bucharest. The Bucharest Early Intervention Project social workers helped foster care families create nurturing environments that included viewing their new foster children as members of their families. A third group of never-institutionalized children born and raised with their Bucharest parents was included in the study, serving as the comparison group. Assessments took place at 30, 42 and 54 months and then later at 8 years old. Reactive attachment disorder was a central focus of the study.

Results from this longitudinal study showed that children who were removed from institutions and raised in foster homes showed a decrease in RAD symptoms compared to those who remained institutionalized. In fact, after the 22-month mark, the foster care group of children had RAD symptoms comparable to children who were never institutionalized. Conversely, those who remained in institutionalized care exhibited consistent signs of RAD extending past the age of 8 years old [56].

The BEIP study has contributed to reducing harmful institutionalization practices and encouraged a global shift from international adoption to family preservation and expanded foster care efforts [57]. Additionally, the BEIP findings provided national insight into the importance of a strong foster care environment for traumatized children. Findings demonstrated that modifying children's caregiving environments through supportive foster care home placement significantly decreased attachment disorder symptoms, providing compelling evidence on treatment approaches for early childhood abuse and neglect [56].

Implications for Foster Care, Adoption, and Social Work Practice

The prevalence of child abuse and neglect in the United States is significantly higher among children who enter foster care or adoption [58]. The U.S. Department of Health and Human Services reports that the national rounded number of child abuse victims in 2022 was 558,899 children (7.7 victims per 1,000 children in the population). Nearly 75% of victims experienced neglect, 17% were physically abused, 11% were sexually abused, and 0.2% were sex trafficked. The national estimate of victims who died from abuse and neglect was 1,990 in 2022. The rate of child fatalities has steadily increased from 2.39 per 100,000 children in 2018 to 2.73 per 100,000 children in 2022 [59]. These statistics underscore the attachment-related risks faced by children in the child welfare system.

Although research on institutional care in international orphanages documents high rates of neglect and abuse, 7.5 million children reside in institutions globally [60]. This includes 450,000 children in Europe and Central Asia [61] and 650,000 children in Sub-Saharan Africa [60]. Approximately 80% of internationally adopted children experience some type of institutionalization in their first year of life and many have experienced inappropriate prenatal and post-natal care, malnutrition, psychological deprivation, and early maternal separation [62]. Adoptees often experience modest delays in areas such as physical development, attachment, academics, and behavior [62]. Some of these factors are mitigated by resilience or protective mechanisms such as temperament, locus of control, and self-esteem. Others can be impacted by pre-adoptive factors such as age at the time of relinquishment or abandonment, conditions of the country of origin, and attachment relationship quality with the original caregiver. Finally, post-adoptive family dynamics such as birth order placement and parenting styles may also affect resilience. The level of influence that pre-adoptive and post-placement factors have on reinforcing the resilience of adopted children is an area needing further research [62].

Education and training for foster and adoptive parents is critical, yet often insufficient [63]. Many caregivers experience secondary traumatic stress [64] when working with children with extensive histories of abuse, multiple psychological diagnoses, and oppositional behaviors [63]. Children diagnosed with RAD are typically challenging to parent, often creating chaos and disruption that can lead to the caregiver feeling disconnected from their child. These externalizing behaviors may cause parents to become overly authoritative, a parenting style that prevents attachment from occurring. Parents of foster and adoptive children with attachment disorders cite concerns around permanent placement and adoption disruption due to insufficient supports [65]. While evidence on the overall prevalence of adoption disruption remains limited, rates are estimated between 9.5% and 25% [66], with cognitive disabilities and behavior problems cited as risk factors [67].

Relational interventions that emerged in the 1970s and 1980s aim to prevent abuse and neglect and improve the parent-child relationship. Often described as attachment-based family therapies, these approaches explore the underlying emotional dynamics in the parent-child relationship [21] and work with parents to create a calm, safe environment in which adoptive children can form healthy attachments [68]. Given the limited evidence for interventions specifically targeting RAD, treatments developed for related disorders such as oppositional defiant disorder and conduct disorder have been adapted for use with children with similar symptomology [69, 70].

Attachment-based family therapy interventions have been shown to reduce foster and adoptive parent stress and improve children's psychosocial adjustment, thereby strengthening developmental and behavioral outcomes [71-73]. Parent-child interaction therapy (PCIT) enhances caregiver responsiveness, reduces externalizing behaviors, and promotes consistent, attuned interactions that support healthy attachment [74]. PCIT occurs in two main phases. The first focuses on creating a nurturing environment through a behavioral technique known as differential social attention (DSA), which ignores maladaptive behaviors while reinforcing a nurturing, prosocial environment. This helps children internalize new relational patterns. The second phase supports parents in giving clear instructions, promoting task follow-through, and maintaining emotional regulation through effective discipline strategies [74].

A growing evidence-base supports integrative play therapy as an effective intervention for children with externalizing or challenging behaviors. Meta-analyses show small to moderate effect sizes for reductions in aggression and overall behavior problems following play therapy [75]. Play therapy integrated into attachment-based family therapy uses therapist-guided play to help the caregiver become the child's source of comfort and co-regulation. The therapist uses play sequences between the parent and child to build trust, create new patterns of interaction, and strengthen the attachment relationship [76].

Because younger children are more dependent on their caregivers and have Internal Working Models more easily influenced than adolescents, traditional attachment-based family therapies have been evaluated with younger children [5, 77, 78]. Emerging attachment-based therapies adapted for adolescents highlight the "secure cycle" as a promising framework [79]. This model emphasizes the adolescent's internal working model (IWM), the caregiver's emotional attunement, and the caregiver's IWM of the adolescent. Clinicians identify disruptions in attachment and provide strategies to strengthen IWMs and enhance communication throughout the attachment cycle [79, 80]. Further research is needed to develop and evaluate interventions for older children that consider the unique needs of their developmental stage and address caregivers' symptoms of secondary traumatic stress.

Attachment-based family therapies should be clearly distinguished from nontraditional attachment therapy methods that try to promote reattachment through forced and often dangerous methods like re-birthing, rage reduction, and noncontingent holding [17, 70, 81]. The limited empirical research on reactive attachment disorder combined with an absence of established treatment guidelines and secondary traumatic stress among adoptive families has created a fragile void that may contribute to the use of harmful approaches used to treat this group [81]. Nontraditional methods have "primarily grown out of anecdotal accounts of success and the fact that few other interventions are available for these children" [81]. Research has clarified the danger of these techniques in recent years. Because of the high risks to children including six deaths, the American Academy of Child and Adolescent Psychiatry, the American Psychiatric Association, and the American Professional Society on the Abuse of Children have made statements against coercive therapies for children with attachment problems [17].

Summary

The primary goals in working with children who have experienced maltreatment are to ensure protection from further abuse, provide therapeutic interventions that address psychological recovery, foster attachment with safe caregivers, and support overall physical and emotional development [7, 17]. The child welfare system operates across multiple levels to support attachment relationships. Even when birth parents cannot provide a safe home, trauma-informed strategies acknowledge the continuing importance of the parent-child bond [82] and work to address parents' own histories of trauma [83]. Evidence-based approaches that actively engage parents and caregivers are critical for promoting the child's psychosocial well-being [73].

While a research gap remains around the diagnosis and treatment of children with attachment disorders [42], evidence points to sensitivity, attunement, emotional regulation, and strong caregiver connections as essential components of interventions. This review has some limitations, the most notable being nascent research on the etiology and treatment of reactive attachment disorder (RAD). Much of the available evidence is drawn from studies of internationally institutionalized children, which may limit generalizability. However, this paper highlights the importance of attachment theory in supporting children with trauma histories.

More than half a century after its inception, attachment theory remains central to understanding and treating trauma-exposed children, including those with reactive attachment disorder (RAD). Its relevance underscores the profound importance of human relationships on child development and emphasizes the need for evidence-based interventions in the context of persistent child abuse and neglect. Building on the foundational work of Bowlby, Ainsworth, and Main, contemporary scholars can advance research and practice grounded in robust theory to support the well-being of vulnerable children.

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