

# Play Therapy's Effectiveness for Children under 12 with Reactive Attachment Disorder

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#### **ABSTRACT**

The treatment of reactive attachment disorder (RAD), characterised by challenges in children under 5 in forming unhealthy emotional attachments, has long been an issue due to the complex nature of the disorder. This literature review examines the ways in which play therapy is effective through a synthesis of case studies and experiments. This includes the impacts of play therapy on improving attachment behaviour, emotional regulation and communication, and learning. Furthermore, its creative nature leads to clinical advantages such as its suitability to children and potential for psychoanalysis. Lastly, the most appropriate variations of play therapy approaches will be discussed in the context of RAD, concluding that cognitive behavioural group therapy or filial therapy may be the most beneficial.

#### Introduction

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), reactive attachment disorder (RAD) is a condition where children form unhealthy and inappropriate social relations to adults due to having experienced neglect and mistreatment during the critical period of brain development below the age of 5 (Chaffin, et al., 2006). This pathogenic care can be characterised of a disregard to the child's basic emotional and physical needs or an inconsistent environment. Due to the nature of the etiology of the disorder, many children with RAD are found in institutional care. RAD can manifest in young children as failure to bond with a primary caregiver, destructive thinking, disrupted cognition, self-sabotage of relationships, difficulties learning from past transgressions, poor temper control, lower IQ, and a resistance to authority (Gray, 2013). This is because the early trauma and lack of support can impede emotional and physical development.

The inability to form healthy and genuine attachments is impaired in children with RAD because they do not have a secure or consistent mental image of others and linger in a state of self-blame for their trauma. As a result, they appear defensive through aggression, display feelings of worthlessness, and struggle with conflict resolution. The development of RAD can be explained through Bowlby's attachment theory (1969), which states that infants innately seek close proximity to their caregiver. As they grow, their attachment system develops based on the treatment and quality of care given by primary caregivers. Subsequently, these children become secure, avoidant, resistant-ambivalent, or disorganised-disoriented (Hardy, 2007). Children with RAD tend to display ambivalence, resistance, avoidance, and disorganisation due to early neglect or abuse (Gray, 2013). Ambivalence in children with RAD manifests through contradictory feelings and actions towards caregivers, such as extreme clinginess, validation seeking, distress upon separation from their caregiver, and mood swings. Resistance is portrayed through opposition to comfort or the formation of relationships. Avoidance is characterised by a reluctance to engage in social interactions such as physical touch, eye contact, and dialogue to protect an individual from emotional pain. Finally, disorganisation is shown through a lack of a clear attachment style due to inconsistent caregiving. These aversive experiences cause the child to be anxious due to the uncertainty of safety, leading them to display these behaviours.

There are various methods used to diagnose RAD including behaviour observation, interviews, and parent-informed questionnaires (Kliewer-Neumann, et al., 2018). To be diagnosed with RAD, the child must be older than

nine months and have developed symptoms before age five (American Psychiatric Association, 2013). In application, RAD is frequently misdiagnosed as its symptoms overlap heavily with other disorders (Hornor, 2008). This is because RAD falls under the branch of externalising psychopathology, best defined within the structure of the Hierarchical Taxonomy of Psychopathology (HiTOP). The structure of HiTOP implies that children with RAD are more prone to disorders such as conduct disorder, oppositional defiant disorder, and other disorders and traits that fall under the externalising spectrum (Kotov et al., 2017). Those diagnosed with RAD also exhibit symptoms similar to many internalising disorders including post traumatic stress disorder (PTSD) and anxiety disorders as a response to the traumatic events they may have experienced (Hornor, 2008). Subsequently, depending on the severity of trauma, children who are susceptible to RAD have a higher rate of comorbidity as they are often more sensitive to succumbing to multiple mental illnesses at a time. Furthermore, as children with RAD tend to be in foster homes and have limited access to mental health professionals, their symptoms are frequently overlooked and they do not receive proper attention. Childhood neglect and abuse, a key diagnostic criterion, is also difficult to account for in instances where the child's history is not accessible. (Richters & Volkmar, 1994).

Previously, the RAD diagnosis was categorised into inhibited or disinhibited types. The inhibited type was defined by an avoidance of comfort from caregivers, particularly when stressed, while the disinhibited type was characterised by the indiscriminate and constant need for attention from any available person (Kliewer-Neumann et al., 2018). However, since the refurbishment of the DSM-5 in 2013, the disinhibited type is now classified as disinhibited social engagement disorder (DSED), whilst RAD now refers exclusively to the inhibited type (Ellis et al., 2023).

While RAD is diagnosed in childhood, its diagnosis does not persist into adulthood but its symptoms and resulting comorbidities can. If left untreated, RAD can skew the developmental trajectory of a child through the disruption of the ability to form secure attachments, causing them as adults to exhibit attachment issues, PTSD, mood disorders, and personality disorders. A research study by Betcher and colleagues (2023) found that adults who had been diagnosed with RAD as a child had high rates of comorbidity with psychiatric illnesses, substance abuse, suicidal ideation and behaviors, and psychiatric hospitalisation.

Previous treatment methods, such as holding therapy, where birth was simulated by wrapping the child in cloth and presenting them to their new caregiver with the intention of the child imprinting on their adopted parent, were dangerous and unethical (Weir, 2011). This practice was discontinued as children underwent suffocation in the process and there was no empirical evidence to support this process. Hence, therapists have turned to more foundational methods such as play therapy.

Play therapy is a form of treatment for children where they engage in structured activities while allowing for the freedom of expression (Koukourikos et al., 2021). This treatment modality allows them to manage their feelings, socialise, or handle behavioural problems, and can be utilised for children who have experienced abuse, are in transitional periods, or have a developmental disorder. There are numerous ways in which play therapy can be executed, but it is typically led by the therapist and involves cognitive exercises, pretence, exploration, and mimetic play (Koukourikos et al., 2021). Other models of play therapy include Theraplay, developed by Ann Jernberg, which involves teaching the family constructive techniques to play with their child, resulting in a stronger family dynamic (Jernberg, 1984).

Virginia Axline (1949), an innovator of nondirective play therapy, believed that by allowing the child to lead play sessions, they were empowered to help themselves, building a foundation for future development. Additionally, play therapy allows for deeper psychoanalysis of the child. According to Anna Freud, a child's playing habits can demonstrate their stage of development and help them build relationships (Donaldson, 1996). Melanie Klein also claimed that play could provide a symbolic insight into the unconscious (Donaldson, 1996). Hence, by observing a child through play therapy, a therapist is able to monitor their development.

A lot of the literature about the nature of RAD lacks empirical evidence or is inconclusive due to the issues outlined above. Hence, for caregivers and therapists, choosing RAD treatment options can be difficult, especially due to the child's young age. Therefore, this literature review will examine the ways in which play therapy affects



attachment behaviour, emotional expression and communication, learning, and mental wellbeing and self regulation in children under 12 impacted by RAD.

#### **Attachment Behaviour**

Firstly, the impact of play therapy on children under 12 with RAD's ability to create secure attachments with caregivers, therapists, and others will be explored. Since children with RAD come from unstable backgrounds, their freedom of expression has often been breached in an unsafe or unresponsive environment. Subsequently, they develop maladaptive attachment behaviours. By immersing them in an atmosphere where they are able to play without interruption, they are able to gain a sense of safety, deconstructing their previous beliefs.

In a paper detailing a case study of short-term, non-directive play therapy, child psychologist Virginia Ryan (2004) identifies several issues with the logistics of play therapy and states that the process should include family members and take place over a long period of time. In non-directive play therapy, also known as child-centred play therapy (CCPT), the child is encouraged to take the lead, allowing them to reveal their inner needs (Ryan, 2004). Delroy, an eight-year-old boy in authority care after allegedly being sexually abused by his mother's partner, was placed in Ryan's practice after exhibiting RAD symptoms and epilepsy. As the play therapy was short term, Ryan was unsuccessful in improving Delroy's attachment development. Short-term play therapy contradicts one of the eight basic principles of non-directive play therapy developed by Axline (1949) which states that play therapy should not be a hasty process so that the child is able to explore their feelings without pressure. This provides a possible explanation as to why Delroy's treatment was unsuccessful.

Due to his previous circumstances and inconsistent care from multiple foster parents, he formed a disorganised and disturbed attachment to his social worker. This was evident in his distress and flight responses when his social worker was absent, highlighting the impact of abandonment on his separation anxiety. Towards the end of the therapy, he moved from protesting to despair and indifference, a pattern identified by Bowlby (1980) in children who have experienced multiple losses of caregivers as a defence mechanism as they anticipate relationships to end. Subsequently, Ryan recommends filial play therapy, which is a type of play therapy that trains the caregiver to engage in constructive play sessions with the child, building longer lasting relationships between them. Hence, it is less likely for the child to form an undesirable attachment to their therapist and social worker.

Kyle Weir (2011) shares a similar view in his book *Integrative Play Therapy*, where he introduces a model called Whole Family Theraplay, which is adapted by Weir and the Theraplay Institute from Ann Jernberg's Theraplay therapeutic approach (Jernberg, 1984). In Whole Family Theraplay, the therapist provides guidance on nurturing interactions and activities which the family then implements in their daily life, resulting in improved communication, relationships, and family routines. In contrast to non-directive play therapy, Theraplay involves caregivers and is highly structured, forming consistent boundaries for children to expect (Weir, 2011). As filial therapy teaches parents to meet their child's caregiving needs, the child is then submerged in a reliable, empathetic, and attentive environment, which is an ideal condition to improve attachment security and appropriate development (World Health Organisation, 2004). For example, Weir recounts his experience working with a family, where they engaged in various games and encouraging practices to treat RAD in an adopted eight-year-old boy, Aaron, who was struggling to integrate with the family. Before the therapy, Aaron had a tense relationship with his adoptive mother characterised by screaming tantrums, guilt, and an inability to bond after five years of care. Weir found that the activities they engaged in that involved elements of physical engagement such as touch and eye contact allowed for a deeper connection between the parents and Aaron, as he began speaking more affectionately to them and seeking them for comfort, displaying aspects of secure attachment (Weir, 2008).



# **Emotional Regulation and Communication**

As reactive attachment disorder is associated with impulsivity and antisocial behaviour, children with RAD tend to bully peers, resulting in social rejection. Additionally, many display feelings of anxiety due to previous trauma. A significant objective of play therapy is to equip young children with the skills to handle situations that may trigger overwhelming emotions, leading to reduced aggressive or antisocial behaviours. Hence, the ability to independently regulate emotions and subsequently express them in a constructive manner is vital in assessing the efficacy of play therapy.

A study by Zamani and colleagues (2020) determined the effectiveness of 10 group sessions of cognitive-behavioural play therapy (CBPT) on anxiety, bullying, impulsivity, and antisocial behaviours in children with RAD through questionnaires including the Spence Children's Anxiety Scale (SCAS) and the Reactive Attachment Disorder Questionnaire (RADQ). The reliability of these scales were calculated using Cronbach's alpha, with a rate of 0.92 and 0.87 respectively, indicating that they provide an accurate measure of anxiety and RAD symptoms. The structured activities integrated the principles of cognitive-behavioural therapy, which is structured to alter harmful thinking patterns and behaviours. This included games that required the articulation of emotions, composure, and confrontation of fear.

Resultantly, they found that CBPT increases self esteem while also reducing anxiety and aggression. Zamani and colleagues explain that this is because playing with friends in a non-judgemental environment allows for the deconstruction of misconceptions that they will be criticised since group playing allows for children to express their thoughts and feelings to peers in a less pressured manner (Zamani et al., 2020). Furthermore, given that structured games involve facilitators modelling appropriate behaviour, children are more likely to copy them, resulting in improved amiability and awareness of social cues. This allowed for children to identify and manage their negative and spontaneous emotions. According to Vygotsky's active theory, children learn through social interactions with an instructor, allowing for the acquisition of skills or knowledge. Moreover, he stated that speech evolves from social to private to internal, allowing for the environment to shape one's inner beliefs. This provides an explanation for the efficacy of therapist-led activities.

In contrast, a study by Wilson and Ray tested how non-directive and individual play therapy affected self-regulation in 36 children between 5 and 10, as measured by two questionnaires filled by both a parent and a teacher (Wilson & Ray, 2018). They found that the treatment group had a 16% improvement in self-regulation, aggression, and empathy compared to the control group. It was effective as it relied on the child to take the lead. Hence, when they encountered obstacles or broke down, they were met with trust from the therapist that they were able to maintain composure. This structure built internal stability and confidence, resulting in greater self regulation. They proposed that increased self-awareness led to a decrease in the mistreatment of others as they were able to recognise when their actions or outbursts were harmful.

Furthermore, a significant feature of play therapy is the welcoming environment that is facilitated. Ryan (2004) notes that the treatment allowed for non-verbal communication, empathy, and unconditional acceptance. Non-verbal communication is valuable in allowing children to express their emotional needs in a less intimidating manner, which can later become a strong foundation for emotional expression, allowing for greater communication in the household, which adoptive families often struggle with (Ryan, 2004). Furthermore, abused children often receive positive and negative punishment for various behaviours, creating an uncertainty of safety in their minds. Since non-directive play therapy creates an environment of unconditional acceptance and the freedom to express oneself, this deconstructs previous conditioning from abuse, allowing for improved communication (Ryan, 2004).

Overall, play therapy has been shown to significantly improve emotional expression and communication in children with RAD across several studies due to an improved environment, the presence of a secure role model, and controlled interactions with peers.



# **Learning Development**

Applying Vygotsky's principles, play therapy also has implications for learning and language development. As children with RAD are often deprived of developmental stimuli at a young age, they are often deficient in social and cognitive functions, resulting in a lack of learning skills compared to peers that have had a secure upbringing (Raska et al., 2012). However, studies have shown that they are able to bridge this gap once acclimated to a supportive environment, as measured by IQ development after adoption (van Ijzendoorn & Juffer, 2006). Furthermore, according to Piaget's stages of cognitive development, an increase in sensory activity involved in play improves executive function and strengthens the formation of new neural networks during the sensorimotor stage. In older children in the preoperational stage, play stimulates the use of imagination and symbolic thought. Therefore, by implementing cognitive-behavioural play exercises, children with RAD are able to compensate for their developmental deficits and enhance their learning capacity as they are exposed to face-to-face interactions paired with kinesthetic activities (Cogher, 1999).

# **Psychoanalysis**

A major advantage of play therapy is that it allows for the psychoanalysis of the child, better informing the therapist of possible further treatment. As previously noted, several developmental psychologists such as Klein, Freud, and Winnicott, have concurred that, when analysed symbolically, play can reveal a child's thoughts and feelings about their circumstances and sense of self (Malchiodi & Crenshaw, 2015). Furthermore, in a family setting, family dynamics can be identified and managed.

It has been observed in various case studies that traumatised children will metaphorically reenact their experiences in play. For example, in a series of individual play therapy sessions, a consistent theme of aggression and isolation was seen in the playing style of a 6-year-old boy named Jason, as he would control his alligator puppet to attack other toys in a vengeful and unusually intense manner (Malchiodi & Crenshaw, 2015). This reflected his internal state regarding his father's abrupt death, whom he had had an insecure/ambivalent attachment to. As the play sessions allowed him to channel his rage in a discrete medium, the therapist was able to express boundaries when he became too violent. Over the course of ten sessions, he became more controlled and exhibited less force when playing, indicating a metaphorical release of his anger (Malchiodi & Crenshaw, 2015). Furthermore, the alligator character also never made any companions in its make-believe narrative. This demonstrated his feelings of being ostracised, as he often did not fit in well with his classmates.

In addition, Jason also engaged in filial therapy, where his siblings and mother pretended the eagle had a broken wing. Although initially obstinately refusing to join, his family convinced him that they needed his help in the scenario until he accepted, showing him that he had a place in the family. Following this breaking point, he began accompanying his family in household activities such as bedtime singing (Malchiodi & Crenshaw, 2015). This demonstrates how children communicate through play to build healthy relationships and restore one's self assurance in their role as a family member.

Overall, this case study illustrates how therapists are able to discern a child's underlying mental struggles through symbolic play.

# Age Appropriate Nature of Play Therapy

Play therapy is typically considered effective for treating children as their prefrontal cortexes are not fully developed. Subsequently, they communicate nonverbally and kinesthetically, which is encompassed by their playing behaviour. Hence, talk therapy is less effective on them as it is heavily based on the concept of personal reflection.



Neurobiologists have found that oxytocin levels rise rapidly when individuals display affection, empathy, and amusement together, increasing interpersonal trust (Stewart & Echterling, 2016). As these aspects are inherently integrated in play due to its creative and engaging nature, trust and wellbeing is promoted during treatment, building a strong relationship between the child and therapist. Furthermore, playing with others increases the firing of mirror neurons, which occurs when an individual either performs an activity or watches others do the same action. Mirror neurons are heavily involved with empathy and observational skills (Sutton, 2023). Thus, by increasing their activity, children with RAD are able to practise emotional awareness and learning. This creates a chemically suitable condition for the formation of new neural pathways, as the exposure to an engaging environment promotes neuroplasticity (Stewart, et al., 2016). Subsequently, they are less susceptible to affiliated disorders in the future.

#### **Discussion**

Several types of play therapy are actively employed by child therapists to address disorders in children. However, the most appropriate approach varies based on the child's emotional needs. Factors to consider include whether the therapy should be non-directive or cognitive-behavioural, conducted in a group setting or one-on-one, and the level of familial involvement.

#### Non-Directive Vs Cognitive-Behavioural

Non-directive play therapy, one of the first structured approaches to play, grants the child freedom to explore toys, art, and their imagination. The therapists' role is to provide a safe and empathetic environment, fostering the child's emotional security. In contrast, the therapist takes an active role in CBPT by identifying negative thought patterns and directing goal-oriented sessions to promote healthy behaviours.

Rasmussen and Cunningham (2008) discuss that non-directive play therapy may be inadequate for treating abuse-reactive children due to the lack of structure, allowing for children to avoid discussing and confronting their abuse to prevent feelings of anxiety, whereas CBPT provides opportunities for cognitive restructuring and deliberate intervention. This is corroborated by the ineffectiveness of non-directive play therapy on Delroy, as he had endured severe abuse from a young age (Ryan, 2004). Hence, for cases of RAD where the individual has experienced more trauma, CBPT may be preferable.

#### Group Setting Vs One-On-One

Group therapy allows for the development of social skills, empathy, and self regulation by interacting with peers. This prepares them for their realistic daily environment, reducing recurring acts of bullying and impulsive behaviour, as seen in the study done by Zamani and colleagues (2020). However, some children may not be ready to socially engage with others in a constructive manner, as their trust and attachment issues render social situations challenging. Conversely, one-on-one therapy provides a more individualised approach, as the therapist is able to pay more attention to the child's emotional and behavioural needs. Hence, any interventions can be tailored to suit the child. Furthermore, the child is able to form a deeper bond with the therapist without the pressure of a group setting, building a foundation for future healthy attachments.

A significant advantage of group play therapy is that it is cheaper and more efficient than individual therapy, as one therapist is able to address the needs of many participants simultaneously. This is noteworthy as children with RAD tend to have limited access to mental health services due to a lack of funds or practitioners, making group therapy more practical.



#### Familial Involvement

Many works strongly advocate for filial therapy, as filial therapy trains caregivers to engage in activities that foster emotional connection to construct a supportive home environment. For example, they are taught how to constructively respond to a child's emotional outbursts. Hence, this directly alleviates RAD symptoms of difficulty in forming relationships with caregivers (Weir, 2011).

Furthermore, in the cases of adoption, filial therapy can help the child adjust to their new home by fostering a sense of security and belonging. Adopted children with RAD often experience feelings of resistance and anxiety as they navigate the transition from their previous environment to a new family. Through filial therapy, parents are trained to engage in therapeutic play sessions that allow the child to express their feelings in a safe and supportive setting. Hence, this builds connections between the child and their adoptive parents, reducing the likelihood of the child returning to foster care and worsening attachment-related issues.

#### **Conclusion**

In conclusion, play therapy is theoretically and neurobiologically very effective in treating symptoms of RAD, as it improves emotional regulation and expression, leading to a decrease in aggressive behaviours and an improvement in attachment styles. However, it is pragmatically difficult to implement as children with RAD have limited access to mental health resources.

Although the most suitable treatment approach varies from each individual, children with RAD may benefit from cognitive-behavioural and filial play therapy the most, as these have direct goals that explicitly align with RAD symptoms.

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#### References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596
- Axline, V. M. (1949). Play Therapy ... A Way of Understanding and Helping "Reading Problems." *Childhood Education*, 26(4), 156–161. https://doi.org/10.1080/00094056.1949.10726243
- Betcher, H. K., Bommersbach, T. J., Perossa, B. A., Larrabee, B., Croarkin, P. E., Romanowicz, M., ... & McKean, A. J. (2023). Adult Outcomes of Children With Reactive Attachment Disorder in a Non-Institutionalized Sample. *The Journal of Clinical Psychiatry*, 84(6), 49518.
- Bowlby, J. (1969). Attachment and loss (No. 79). Random House.
- Bowlby, J. (1980). Attachment and loss, Vols I-III. London: Hogarth Press.
- Chaffin, M., Hanson, R., Saunders, B. E., Nichols, T., Barnett, D., Zeanah, C., ... & Miller-Perrin, C. (2006). Report of the APSAC task force on attachment therapy, reactive attachment disorder, and attachment problems. Child maltreatment, 11(1), 76-89.
- Cogher, L. (1999). The use of non-directive play in speech and language therapy. Child Language Teaching and Therapy, 15(1), 7-15.
- Donaldson, G. (1996). Between practice and theory: Melanie Klein, Anna Freud and the development of child



- analysis. Journal of the History of the Behavioral Sciences, 32(2), 160-176.
- Ellis, E. E., Yilanli, M., & Saadabadi, A. (2023). Reactive attachment disorder.
- Gray, S. G. (2013). Psychopathology of reactive attachment disorder. In A. S. Davis (Ed.), Psychopathology of childhood and adolescence: A neuropsychological approach (pp. 337–356). Springer Publishing Company.
- Hardy, L. T. (2007/02//). Attachment Theory and Reactive Attachment Disorder: Theoretical Perspectives and Treatment Implications. Journal of Child and Adolescent Psychiatric Nursing, 20(1), 27-39. https://www.proquest.com/scholarly-journals/attachment-theory-reactive-disorder-theoretical/docview/232962773/se-2
- Hornor, G. (2008). Reactive attachment disorder. Journal of Pediatric Health Care, 22(4), 234-239.
- Jernberg, A. (1984). Theraplay: Child therapy for attachment fostering. Psychotherapy: Theory, Research, Practice, Training, 21(1), 39–47. https://doi.org/10.1037/h0087526
- Kliewer-Neumann, J. D., Zimmermann, J., Bovenschen, I., Gabler, S., Lang, K., Spangler, G., & Nowacki, K. (2018). Assessment of attachment disorder symptoms in foster children: comparing diagnostic assessment tools. Child and adolescent psychiatry and mental health, 12, 1-9.
- Kotov, R., Krueger, R. F., Watson, D., Achenbach, T. M., Althoff, R. R., Bagby, R. M., ... & Zimmerman, M. (2017). The Hierarchical Taxonomy of Psychopathology (HiTOP): A dimensional alternative to traditional nosologies. *Journal of abnormal psychology*, *126*(4), 454.
- Koukourikos, Konstantinos, Areti Tsaloglidou, Laila Tzeha, Christos Iliadis, Aikaterini Frantzana, Aristi Katsimbeli, and Lambrini Kourkouta. "An overview of play therapy." *Materia socio-medica* 33, no. 4 (2021): 293.
- Malchiodi, C. A., & Crenshaw, D. A. (Eds.). (2015). *Creative arts and play therapy for attachment problems*. Guilford Publications.
- Raaska, H., Elovainio, M., Sinkkonen, J., Matomäki, J., Mäkipää, S., & Lapinleimu, H. (2012). Internationally adopted children in Finland: parental evaluations of symptoms of reactive attachment disorder and learning difficulties–FINADO study. Child: care, health and development, 38(5), 697-705.
- Rasmussen, L. A., & Cunningham, C. (1995). Focused Play Therapy and Non-Directive Play Therapy. Journal of Child Sexual Abuse, 4(1), 1–20. https://doi.org/10.1300/J070v04n01\_01
- Richters, M. M., & Volkmar, F. R. (1994). Reactive attachment disorder of infancy or early childhood. *Journal of the American Academy of Child & Adolescent Psychiatry*, 33(3), 328-332.
- Ryan, V. (2004). Adapting Non-directive Play Therapy for Children with Attachment Disorders. Clinical Child Psychology and Psychiatry, 9(1), 75–87. https://doi.org/10.1177/1359104504039174
- Stewart, A. L., Field, T. A., & Echterling, L. G. (2016). Neuroscience and the magic of play therapy. *International Journal of Play Therapy*, 25(1), 4.
- Sutton, J. (2023). Mirror neurons and the neuroscience of empathy. PositivePsychology.com. https://positivepsychology.com/mirror-neurons/#the-neuroscience-of-empathy-and-mirror-neurons
- Van IJzendoorn, M. H., & Juffer, F. (2006). The Emanuel Miller Memorial Lecture 2006: Adoption as intervention. Meta-analytic evidence for massive catch-up and plasticity in physical, socio-emotional, and cognitive development. Journal of child psychology and psychiatry, 47(12), 1228-1245.
- Weir, K. N. (2008). Using integrative play therapy with adoptive families to treat reactive attachment disorder: A case example. *Journal of Family Psychotherapy*, 18(4), 1-16.
- Weir, K. N. (2011). Playing for Keeps: Integrating Family and Play Therapy to Treat Reactive Attachment Disorder. In A. A. Drewes, S. C. Bratton, C. E. Schaefer (Eds.), Integrative Play Therapy (pp. 241–264). John Wiley & Sons, Inc. doi:10.1002/9781118094792.ch14
- Wilson, B. J., & Ray, D. (2018). Child-centered play therapy: Aggression, empathy, and self-regulation. Journal of Counseling & Development, 96(4), 399-409.
- World Health Organization. (2004). The importance of caregiver-child interactions for the survival and healthy



development of young children: A review.

Zamani, N., Tavallaei, M., & Kahdouei, S. (2020). Cognitive-behavioral play therapy in children with reactive attachment disorder: help reduce anxiety, impulsivity, bullying and antisocial behaviors. (pp. 115-122) Journal of Advanced Pharmacy Education & Research.