

# **Best Practices in Children's Mental Health:**

A Series of Reports Summarizing the Empirical Research on Selected Topics

## **Report #11** **“Reactive Attachment Disorder: Concepts, Treatment and Research”**

**June, 2004**

**Produced by the University of Kansas**  
School of Social Welfare  
Twente Hall  
Lawrence, KS  
In conjunction with  
Kansas Social Rehabilitation Services

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Prepared under grant No. KAN23373; and contract No. 0702-HCP-0603-078

## **Reactive Attachment Disorder: Concepts, Treatment and Research**

### **Executive Summary**

Reactive Attachment Disorder (RAD) is a disorder characterized by controversy, both with respect to its definition and its treatment. By **definition**, the RAD diagnosis attempts to characterize and explain the origin of certain troubling behaviors in children. The RAD diagnosis presumes that “pathogenic care” of a young child can result in an array of markedly disturbed behaviors in social interactions and poor attachments to caregivers and others. (See full definition in the body of this report). The RAD diagnosis derives from the attachment theories of John Bowlby and Mary Ainsworth. Several authors question whether RAD is a valid diagnostic category, citing the overlap of symptoms with Pervasive Developmental Disorder and other disorders, the inconsistent connection to attachment theory, and the lack of empirical validation.

**Assessment** and diagnosis of RAD is complicated and difficult for several reasons. First, children are not always referred for mental health services for attachment problems per se, but because of a variety of behavioral that may co-exist with RAD. Second, in the abuse and neglect population there may be over-reporting because of a predilection to view these children as having attachment disorders stemming from early abuse experiences. Third, differential diagnosis can be problematic because RAD symptoms can overlap or be confused with symptoms of Post Traumatic Stress Disorder, Pervasive Developmental Disorder, depression, anxiety, and other conditions. The Association for the Treatment and Training in the Attachment of Children (ATTACH), as well as other authors, recommend a multi-dimensional assessment including systematic observations, extensive history, school and family reports, and individual and family assessment. The review of the literature uncovered one assessment instrument that has been sufficiently researched and can aid in the assessment process: the Randolph Attachment Disorder Questionnaire (RADQ).

The controversy about **treatment** of children with RAD centers on the practice of “holding therapy”, especially when the child is held against his/her will and struggles to resist. Although proponents argue that this experiential method is necessary for the child to establish a bond, or attachment, with a caregiver, critics decry that the experience can be traumatizing, and that any apparent behavioral gains could be the result of trauma bonds, not healthy attachment relations. While ATTACH and other authors attempt to distinguish between coercive and non-coercive holding, the difference between “therapeutic” or “nurturing” holding and coercive traumatizing holding remains a fine line and a matter of interpretation. In addition, there is very little empirical evidence to support the practice of holding therapy, on either an inpatient or outpatient basis. For these reasons, holding therapies should be avoided in favor of less intrusive methods, including trauma-based, family-centered, and community-based interventions.

## **Reactive Attachment Disorder: Concepts, Treatment, and Research**

### **Introduction**

In recent years, the diagnosis of “Reactive Attachment Disorder” (RAD) has received increased attention in professional as well as public circles. On the one hand, the concept of disordered attachment holds promise for understanding and eventually alleviating the challenging behaviors of some children with traumatic histories of abuse or neglect. On the other hand, current definitions of RAD as well as controversial treatment protocols have led to significant concerns, criticism, and confusion. This interest in the theory, diagnoses and treatment of attachment disorders has not been matched by empirical investigations, especially for assessment and treatment (O'Connor & Zeanah, 2003). This lack of knowledge is exacerbated by substantial differences among professionals about how phenomena are best defined. The way in which attachment concepts are used in clinical practice and research today does not always correspond with the original theoretical conceptualizations, and definitions used among professionals do not always correspond with current diagnostic definitions in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) or the International Classification of Diseases (ICD-10) (O'Connor & Zeanah, 2003).

In a recent publication, Howard Steele (2003) concluded,

“The concept of attachment disorder, how it is assessed, and what diagnostic guidelines are most helpful/valid/reliable remains a matter of some debate, and is in urgent need of research. To date, there is no systematic evidence-based approach for treating children with attachment disorders, and the very concept of ‘attachment disorders’ remains controversial due to substantial questions about assessment and diagnosis.” (p. 219).

The following review of national, and some international, literature was conducted in order to determine the state-of-the-art knowledge about Reactive Attachment Disorder and its treatment. Specific attention was given to the question “What is the appropriate place for “holding therapies” in treatment?”. The review is based on systematic searches of relevant databases (PubMed, PsycInfo, WilsonWeb, Social Work Abstracts, and Exceptional Children) as well as books and internet sources. (Abstracts of twenty-six published articles and books are included in Appendix B.) This report is organized according to the following sections: concepts, assessment, treatment overview, treatment models and their empirical support, and summary.

## Concepts

### Conceptual Roots

The diagnostic category of “Reactive Attachment Disorder” (RAD) has its conceptual roots in the attachment theory posited by John Bowlby (1969, 1973, 1980) and Mary Ainsworth (1969). During the 1960s and 70s, Bowlby and Ainsworth conducted landmark research on the dyadic behaviors of small children and their caregivers to study how children developed a sense of physical and psychological security. Bowlby defined “attachment behaviors” as those behaviors children display to seek and initiate proximity to their caregivers during times of stress (Bowlby, 1988). Bowlby and Ainsworth hypothesized that the attachment styles developed in infancy become internalized as representations, which then serve as working models, or expectation templates, for later relationships in adolescence and adulthood. These working models reflect “the child’s appraisal of, and confidence in, the self as acceptable and worthy of care and protection, and the attachment figure’s desire, ability and availability to provide care and protection” (Solomon & Carol, 1999, p. 5). Bowlby and Ainsworth conceived of attachment as a dynamic process that is interactive and intersubjective. In other words, attachment is neither an entity residing solely within the child nor something simply transmitted by a caregiver. Rather it is a dynamic development between child and caregivers, resulting in a complex system of behaviors, cognition, and emotions.

Using a series of experiments during which infants were first separated and then reunited with their caregivers, Bowlby and Ainsworth (Bowlby, 1969, 1973, 1980; Ainsworth, 1969) identified two basic types of attachment behaviors: *secure* attachment and *insecure* attachment. Securely attached children have developed an expectation of care and protection should it be necessary and can engage with the world with sufficient trust. They use their caregiver as a “secure base” from which to explore the world. Insecurely attached children seem uncertain whether they will be afforded protection or care when they need it because caregivers are perceived as only inconsistently available, entirely unavailable or rejecting. These children seem to miss a secure base and engage with the world by either withdrawing from it or attacking it. Bowlby and Ainsworth further discriminated between *two insecure behavior subtypes*: 1) *insecure avoidant* behaviors during which children physically and affectively avoided the caretaker upon his or her return, and 2) *insecure dependent or ambivalent* behaviors when children display conflicting, or highly immature behaviors toward the caregiver.

For children whose attachment seems problematic, but who show no clear coherent pattern of avoidance or ambivalence upon reunion with caregivers, Main and Solomon (1990) more recently offered the term *disorganized attachment*. Disorganized attachment describes a wide array of odd, contradictory or fearful responses of children who seem unable to create a lasting response strategy in separation-reunion situations. The authors hypothesized that disorganized attachment patterns may stem from prolonged adverse separations of children from their caregivers, or from their experience of the caregiver as frightening or frightened, and as unable or unwilling to provide care or

resolution. As a result, behaviors, thoughts and emotions remain unintegrated, and likely put these children at risk for future psychological disorders such as depression, conduct disorder etc. (Solomon & Carol, 1999; Lyons-Ruth, 1996). It is important to note, however, that not all insecure attachments are automatically disordered. While attachment classified as “disordered” is always insecure, most insecure attachment behaviors are not disordered (Zeanah, 1996).

### **Definition**

The Diagnostic and Statistical Manual (DSM-IV, American Psychiatric Association, 1994) defines the criteria for a diagnosis of Reactive Attachment Disorder (RAD) as follows,

- A. Markedly disturbed and developmentally inappropriate social relatedness in most contexts, beginning before age 5 years, as evidenced by either (1) or (2):
  - (1) persistent failure to initiate or respond in a developmentally appropriate fashion to most social interactions, as manifest by excessively inhibited, hypervigilant, or highly ambivalent and contradictory responses (e.g., the child may respond to caregivers with a mixture of approach, avoidance, and resistance to comforting, or may exhibit frozen watchfulness)
  - (2) diffuse attachments as manifest by indiscriminate sociability with marked inability to exhibit appropriate selective attachments (e.g., excessive familiarity with relative strangers or lack of selectivity in choice of attachment figures)
  
- B. The disturbance in Criterion A is not accounted for solely by developmental delay (as in Mental Retardation) and does not meet criteria for a Pervasive Developmental Disorder.
  
- C. Pathogenic care as evidenced by at least one of the following:
  - (1) persistent disregard of the child's basic emotional needs for comfort, stimulation, and affection
  - (2) persistent disregard of the child's basic physical needs
  - (3) repeated changes of primary caregiver that prevent formation of stable attachments (e.g., frequent changes in foster care)
  
- D. There is a presumption that the care in Criterion C is responsible for the disturbed behavior in Criterion A (e.g., the disturbances in Criterion A began following the pathogenic care in Criterion C).

### **Critique of the DSM Definition**

The current DSM definition of RAD is not without its critics. Zeanah (1996) as well as other authors (Werner-Wilson & Davenport, 2003; Hanson & Spratt, 2000; O'Connor & Zeanah, 2003) contend that RAD is too narrow a conceptualization that is validated neither empirically nor theoretically. In a thorough critique of RAD definitions, Zeanah (1996) argues that the term ‘reactive’ was merely an attempt to differentiate RAD

from Pervasive Developmental Disorder (PDD) which can present with similar symptoms. While PDD was thought to have organic causes, RAD was conceptualized as a functional impairment brought about by adverse rearing conditions. Yet, this dichotomy of organic versus functional holds very little value given research findings about the interactive nature of social factors and brain development. In this way of thinking, RAD is no more or less “reactive” than other psychiatric disorders, and children with PDD may very well also suffer from attachment disturbances.

In addition, RAD conceptualizations are inconsistent with Bowlby's and Ainsworth's concepts which are based on child-caretaker interactions (Zeanah, 1996) while current RAD criteria refer to more than primary caregiver attachment and include disturbances in the child's social abilities and relationships across contexts. The cutoff at five years of age lacks empirical validation as does the criterion of pathogenic care as a necessary or sufficient factor for RAD (Hanson & Spratt, 2000). By definition, children with RAD must have experienced “pathogenic care,” i.e. abuse or neglect, or repeated changes of primary caregivers which prevented the formation of stable attachments. This definition means that all children who have been abused or neglected automatically meet this criterion leading to a possible overdiagnosis of RAD in this population (Hanson & Spratt, 2000).

O'Connor & Zeanah (2003) proposed the concept of an “attachment spectrum” that ranges from “secure forms” to “ordinary forms of insecure attachments” to “disorders of non-attachment” whereby only the latter usually describes what is meant by attachment disorder, and RAD, today. Behavioral indicators of insecure attachment (such as lack of affection or indiscriminate affection toward strangers, absent, odd, ambivalent or excessive comfort seeking, excessive inhibition in exploration or exploration without checking back etc.), can be seen in healthy children as well and should become clinical indicators only when these behaviors seem extreme patterned behaviors toward parent figures (Zeanah, 1996).

Hanson and Spratt (2000) also contend that the DSM fails to capture and distinguish various other clinical presentations of RAD including disorganized, avoidant, and resistant attachment behaviors. The DSM distinguishes only two subtypes of RAD, the disinhibited, and the inhibited type. Children who are inhibited persistently fail to initiate or respond to relational engagement appropriately. Those who are disinhibited typically display indiscriminate familiarity with strangers (Hanson & Spratt, 2000). While both types are described in the literature, there is more consistent validation for the disinhibited subtype while the inhibited form is rarely addressed (O'Connor & Zeanah, 2003). The inhibited category in particular does not match research results on secure/insecure/disorganized attachment behaviors making research and validation of this subtype difficult (O'Connor & Zeanah, 2003).

A study by Minnis, Rabe-Hesketh, and Wolkind (2002) somewhat validated the categorization of inhibited and disinhibited subtypes. The study reports results of the development and testing of a 17-item questionnaire for RAD children in 121 families in Central Scotland. The authors found four main factors that accounted for a total of 94%

of the variance in the sample. Cluster analysis showed that these factors fell into three clusters, one corresponding to the disinhibited type of AD, one corresponding to inhibited type, and one in which children did not seem to suffer from RAD. However, some factors in the questionnaire showed significant overlap of items which appeared to apply to both subtypes.

### **Prevalence and Etiology**

Though RAD is believed to be very uncommon, there are no epidemiological data to examine the prevalence or course of RAD (Hanson & Spratt, 2000). Based on maltreatment research, prevalence rates have been estimated at 1% of all children (Hall & Geher, 2003), but as Hanson and Spratt (2000) point out, it is problematic to base estimates of RAD rates on the prevalence of abuse or neglect. Even though pathogenic care is by definition the assumed primary factor, etiologically no one leading cause of disturbed attachment is known. Not all children who experience abuse or neglect develop attachment problems, and some behavioral symptoms of RAD may occur without the presence of pathogenic care.

An exploratory study by O'Connor and Rutter (2000), for instance, evaluated the impact of early severe deprivation on the attachment behaviors of 165 Romanian children adopted in the United Kingdom and 52 comparison adoptees born in the UK. The authors found an association between early deprivation and the occurrence of attachment disorders (AD). However, the link seemed complex and deprivation appeared not as a singular cause for AD. Seventy percent of children who had been exposed to severe deprivation of more than two years did *not* exhibit marked attachment problems. The authors conclude that "grossly pathogenic care is not a sufficient condition for attachment disorder behavior to result" (O'Connor & Rutter, 2000, p. 710). At the same time, disturbances were evident even when the deprivation was limited to early months in life leading the authors to wonder if severe early deprivation (even less than 6 months) may have long-term effects on attachment behaviors. It seems that the time and duration of attachment disruption may be related to the severity of subsequent disturbances. The earlier and the more prolonged the disruption the more severe the subsequent disturbance. Study results indicated no decrease of RAD symptoms over a two-year period.

Other contributing risk factors include domestic violence, parental substance abuse or teenage parenthood (Hanson & Spratt, 2000). Like trauma and maltreatment, attachment disruption is likely to affect the development of neurological pathways. Biological factors such as temperament or prematurity are, in turn, likely to affect attachment (Hanson & Spratt, 2000).

Cultural aspects of attachment and cross-cultural comparisons are only beginning to be studied. A Canadian project named "Attachment across cultures" was developed to support service providers in promoting positive cross cultural attachment practices. (See website at <http://www.attachmentcrosscultures.org>). The authors (Reebye, Ross, and Jamieson) point out that one of the complexities of cross-cultural research is that it must recognize that infants and children learn to behave in a manner conducive to their

successful adaptation within the cultural norms around them. The infant behaves in a manner that responds to maternal behavior that is both intuitive and reflective of expected behavior in the community. Thus, attachment behaviors may look different in different cultures.

## **Assessment**

Currently, there is no gold standard for the assessment of attachment disorders in general, or Reactive Attachment Disorder in particular (O'Connor & Zeanah, 2003). Usually, children and adolescents are not referred to mental health services for attachment problems per se but because of behavioral difficulties such as attention problems, difficulties with peers and families, aggression and so forth (Byrne, 2003). On the other hand, referral biases for abused/neglected children may lead to significant overreporting and require a clearer distinction of core RAD symptoms from other co-occurring problems (Byrne, 2003). This distinction, however, is difficult to achieve because RAD symptoms may overlap or be confused with symptoms of Posttraumatic Stress Disorder (PTSD), Pervasive Developmental Disorder (PDD), childhood depression, anxiety, attention deficit disorders (ADD/ADHD), reactive aggression of maltreated children, or conduct disorder (Hanson & Spratt, 2000). The DSM emphasis on behavioral difficulties has invited the expansion of symptom lists for the purpose of assessment. These lists often extend far beyond the initial criteria resulting in a "laundry list" of behaviors that may more appropriately be identified with other diagnoses or by the range of temperaments (Hanson & Spratt, 2000; O'Connor & Zeanah, 2003).

Minnis, Rabe-Hesketh, and Wolkind (2002) found that behavioral descriptors in their questionnaire did not always distinguish disordered behavior from behaviors of an immature or anxious but otherwise normal child. Results of their study indicated a statistically significant association of RAD with a history of sexual abuse but did not reveal any directionality. In other words, it remains unclear if sexual abuse was part of the pathogenic care thought to cause RAD or if disinhibited RAD children were more vulnerable to sexual abuse. The authors concluded that it remains difficult to identify core symptoms of RAD that clearly distinguish this diagnosis from others. Future research will need to establish the developmental course of RAD and answer the question where insecure attachment styles end and attachment disorders begin (Minnis, Rabe-Hesketh, & Wolkind, 2002).

Assessments best rely on various sources including systematic observations, interviews, questionnaires and assessment of social cognition (although existing instruments may not be specific enough) (O'Connor & Zeanah, 2003). No single instrument, and no observations of single interactions cannot accurately reflect the quality of attachment, and behavioral descriptions alone may not be sufficient to assess children of preschool age or older (Whitten, 1994). Insofar as caregivers are part of the attachment dynamic, using caregiver reports alone to diagnose is also, at least potentially, problematic (Minnis, Rabe-Hesketh, & Wolkind, 2002).



Marvin and Wheelan (2003) from the Parent-Child Attachment Clinic at the University of Virginia emphasize that clinical assessment protocols should be responsive not only to child and parent characteristics but to the *interaction* of parent and children. Because of the strain parents frequently experience, they may display disengaged, frustrated relations to the child. This parental behavior can be mis-read by clinicians as the source of the disturbance when it is a reaction to pre-existing attachment problems.. Protocols should be guided by strengths and limitations of empirical data, and consistent with clinical standards relying on convergent data from multiple sources and procedures including record review, open ended interviews with parents, children (if old enough), and professionals, standardized questionnaires, video-taped free play, strange situation or other appropriate separation-reunion situation followed by parental behavioral management (like cleaning up toys), doll story completion, or for children age 14 or older the Adult Attachment Interview (Marvin & Wheelan, 2003).

Whitten (1994) uses the assessment to differentiate between attachment behavior patterns and trauma-bond behavior patterns. The former follow the objectives of safety, exploration, avoiding danger and affiliation, while the latter have as objectives the well-being of the adult, regulating intensity of feelings, limited interaction and safety. Adult reports and child self-report checklists, direct observation and projective techniques (such as Achenbach Child Behavior Checklist, CBCL; MIM, kinetic family drawing etc.) serve as standard assessment instruments to answer such questions as:

- Under what conditions is the child compliant?
- Who regulates the intensity of feelings in the parent-child interaction?
- Does the adult help the child function more independently?
- Under what conditions does the child explore?
- How does the child use the adult in the exploration?
- How does the adult support or hinder exploration? (Whitten, 1994)

Assessment at the Attachment and Bonding Center (ABC) in Ohio consists of biographies of the parents and the child written by the parents, clinical assessment of the family and the child individually, including observation of the child with family and strangers, as well as school reports (Minnis & Keck, 2003). Assessment measures of the Spaulding Adoption program at Beech Brook, Ohio, include the Beech Brook Attachment Disorder Diagnostic Questionnaire, the Devereux Scale of Mental Disorders (DSMD), art therapy assessments and a family scale (Moss, 1997). The Beech Brook Questionnaire is a checklist tested only with a clinical sample of 101 children but not with non-clinical samples. Statistical analysis of the pilot study resulted in two dimensions: positive (healthy) and negative (pathological) attachment (Moss, 1997). No larger scale study examining reliability or validity of the instrument could be located in the peer reviewed literature.

In addition to symptom checklists (Levy & Orlans, 1998; Fahlberg, 1991), a few assessment instruments for RAD have been described in the literature. These include 1) the 30-item Randolph Attachment Disorder Questionnaire (RADQ) (Randolph, 2001), 2) a 17-item questionnaire developed in Scotland (Minnis, Rabe-Hesketh, & Wolkind, 2002), and 3) the Reactive Attachment Disorder Scale (RADS; Hall & Geher, 2003)

consisting of 74 items. The RADQ (Randolph, 2001) is a Likert-type scale asking the caregiver to indicate the severity of particular child behaviors. According to Randolph (2001) the RADQ is supported by extensive validity and reliability research. A known limitation of the instrument is its susceptibility to distortion by parents who may over- or underestimate their child's behaviors. Therefore an evaluator usually administers the RADQ item by item. The Scottish RAD questionnaire (Minnis, Rabe-Hesketh, & Wolkind, 2002) was developed to measure both the inhibited and disinhibited subtype of RAD and was administered to foster parents. Though the questionnaire has good test-retest and interrater reliability, it was only tested only with a small sample (n=121). Cluster analysis showed significant overlap of items which means that some items did not sufficiently capture differences between inhibited and disinhibited RAD symptoms. The Reactive Attachment Disorder Scale (Hall & Geher, 2003) was developed for a specific research study and specified behavioral symptoms based on the DSM-IV criteria. Tested only with a small sample, the RADS showed sufficient reliability and convergent validity with subscales of the Child Behavior Checklist (CBCL). Factor analysis showed that the RADS produced only one interpretable factor accounting for general behavioral problems. The other factors did not seem particularly meaningful or powerful. In sum, at this point only the RADQ seems a sufficiently researched instrument. Details about the RADQ are available in Randolph (2000) *Manual for the Randolph Attachment Disorder Questionnaire-RADQ*, (3<sup>rd</sup>. Ed.) Evergreen, CO: The Attachment Center Press.

## **Treatment Overview**

To date, there are no empirically validated treatments for Reactive Attachment Disorder (Hanson & Spratt, 2000; Steele, 2003, O'Connor & Zeanah, 2003). Studies about treatment effectiveness are still relatively rare, and frequently lack appropriate controls or large sample sizes (Hanson & Spratt, 2000; Wilson, 2001). O'Connor and Zeanah (2003) grouped existing treatment approaches into four main fields: family support and parent training; socio-cognitive interventions; attachment-based interventions; and holding therapies. A fifth set of approaches relies on practices developed for the treatment of trauma. Many of the models currently promoted use a mixture of components.

### **Family Support and Parent Training**

Alleviating parents' frustration and stress is often a legitimate part of treatment although carryover effects to children are not clear. As with other treatments, some behavioral improvements (not wandering off with strangers etc.) can be achieved, but it remains unclear whether these changes correlate with actual improvements in attachment to the caregiver (O'Connor & Zeanah, 2003). Anecdotal evidence also suggests that parent groups may be an effective model, including networks via the internet (O'Connor & Zeanah, 2003). It is not yet clear how adoptive or foster parents are best involved in treatment but most treatment models include families in their interventions (Levy & Orlans, 1998; Minnis & Keck, 2003). Respite care may be useful to relieve familial stress; however, there are concerns about the appropriateness of this service for RAD

children who are least likely to cope well with repeated separations (O'Connor & Zeanah, 2003).

A small study in Turkey evaluated 15 RAD children (ages 24-45 months) whose parents participated in parent education and training. The treatment aimed at improving the parenting skills and provided three months of weekly parent education and training in emotional, social and language development, managing stereotypical behaviors, self-care, addressing feelings of guilt, and involvement in child-directed play activities. Measures included pre- and postnatal physical and psychiatric symptoms through retrospective interviews of the mother, retrospective temperament assessment, familial caregiving patterns, TV viewing habits, developmental assessments, and behavioral observations of child-caregiver interactions. Data indicated that 66.7% of pregnancies were unplanned. Forty-seven percent of mothers had severe anxiety or depressive symptoms during pregnancy, and 53% of mothers reported depressive symptoms after delivery leading the authors to suggest that maternal depression may be an etiological factor for tendencies to neglect the child or fail to respond to the child appropriately. Subjects in this study are a somewhat unusual RAD population in that they were not adoptees or foster children, but lived with their own families. Only few had experienced recurrent changes of caregivers. One finding concerned the amount of TV watching. Children watched an average of 7.26 hours per day which authors considered an indicator of emotional neglect. The mean age of beginning to watch TV was 7 months. After three months of treatment, improvements were noted for language and communication development, aggressive behaviors, stereotypical behaviors, and agitated behaviors. Since there was no control or comparison group, the effectiveness of the parent education/training could be accounted for by other factors including natural maturation.

### **Socio-Cognitive Treatments**

**These** target the behaviors and thinking patterns that underlie and/or accompany attachment disorders. They are, however, not yet specifically targeted to or validated for children with attachment disorders (O'Connor & Zeanah, 2003). Generally, this approach involves cognitive and behavioral modification interventions commonly used for the treatment of children with emotional or behavioral difficulties.

### **Attachment-based Interventions**

This type of intervention derives from attachment theory and target real-life interactions between infants and caregiver. Aiming to facilitate the caregiver's capacity to serve as a secure base, they usually focus on the sensitivity and response of the caregiver. This model does not account for disordered attachment behavior of children whose caregivers seem adequately sensitive (O'Connor & Zeanah, 2003).

Based on his clinical experience, Hughes (2003), for instance, outlines seven principles of treatment and parenting intended to increase the attunement of caregiver, therapist and child:

1. Therapist and caregiver must themselves be autonomous (secure) in their attachment strategies because they are to co-regulate the child's affect and co-construct the meaning of the child's experiences. With a sufficiently secure caregiver, the therapist facilitates parent-child interactions, and secures parents' comfort and support in the process. If the parents themselves seem not sufficiently resolved about their own attachment history, an initial separate period of individual treatment for parent and child is recommended.
2. Caregivers and therapist must assume an active, intersubjective approach (attunement) in which the child's experience is made clear. The parent's understanding of the child's inner life becomes a way for the child to understand and eventually regulate the experiences.
3. Caregiver and therapist need to make their own experiences of the child very obvious (even in exaggerate non-verbal ways like one communicates with infants or toddlers) because abused and traumatized children often mis-read non-verbal cues or misinterpret signs.
4. Therapist and caregiver maintain interpersonal emotional tone of acceptance, empathy, curiosity, playfulness, sensitivity, responsiveness and availability, matching the communication of child and adult.
5. Conflicts and misattunements are directly addressed with efforts to repair the immediate experience (counteracting shame and fear frequently felt by children with traumatic histories)
6. When children experience stress or other dysregulations of affect they are brought closer to the caregiver (unless the caregiver is dysregulated) who will provide the regulation and modeling. It is central for parents to be able to maintain a vision of the child's inner strength and potential to become more adaptive.
7. Caregiver and therapist employ cognitive and behavioral treatment strategies. These strategies follow, not precede, states of attunement, interpersonal motivation, and meaning-making.

To repeat, there have been no published empirical studies of this approach.

### **Holding therapies**

Because of the considerable controversy surrounding "holding therapies," it is prudent to emphasize that not all procedures called "holding therapy" are alike. As James (1994) explains, some therapies called holding therapy, attachment therapy or rage therapy include coercive methods including prolonged restraint for purposes other than the safety of the child, prolonged noxious stimulation such as tickling, prodding, poking, and provoking, or interference with bodily functions such as breathing. These same terms, however, are sometimes employed for practices that are not coercive, making it necessary to take a close look at the theory and practices described for various models.

Neurophysiological research certainly supports the importance of touch in the healthy development of children (Levy & Orlans, 1998; Minnis & Keck, 2003). That is, touch is necessary for healthy development of the brain and general health of a child. Still, the question who should hold or touch whom, when, and how in order to facilitate

successful attachment is not as easily answered as some proponents of holding therapies seem to suggest.

***Proponents of holding therapy*** claim its effectiveness and contend that physical holding of the RAD child provides a necessary experiential, pre-verbal component of treatment that allows a healthy re-attachment to replace previous unhealthy attachments patterns (Randolph, 2001; Myeroff, Mertlich & Gross, 1999; Levy & Orlans, 1998; Myeroff & Randolph, 1997) [for details about studies see "Models" below]. Initial holding practices were rooted in "rage reduction" therapies which used highly intrusive methods to force a "cathartic release of emotions" (Randolph, 2001). Later versions of holding therapies often abstain from highly forceful methods but still employ modified holding techniques and maintain their theoretical assumptions of cathartic release of rage and developmental arrest.

***Critics of Holding Therapy*** consider theoretical claims about the need for cathartic release and breaking through developmental arrest outdated (Hanson & Spratt, 2000; O'Connor & Zeanah, 2003). Critics also point out that such treatment itself may be traumatizing and lacks adequate empirical validation to ensure its effectiveness and being harm free (O'Connor & Zeanah, 2003; Steele, 2003; Wilson, 2002; James, 1994). While a few small studies (Myeroff, Mertlich & Gross, 1999; Myeroff & Randolph, 1997) have shown a reduction of aggressive and delinquent behaviors, they did not prove the formation of positive attachments (the stated goal of attachment therapy). The lack of long term data also leaves the question if treated children will be able to form more stable attachments in adolescence or adulthood (Wilson, 2002). Authors have likened some of the techniques to brainwashing "in which individuals are belittled, degraded, and forced into submission" (Wilson, 2002 p. 47) whereby positive effects could well be attributed to fear rather than formation of attachment.

In other words, it is possible that coercive holding practices foster trauma bonds, but not healthy attachment relations (James, 1994). Given the significant trauma history of children with RAD, therapies that use physically or psychologically coercive methods are likely to traumatize or re-traumatize already vulnerable children, and are antithetical to established trauma treatments. Trauma treatment should empower clients, not frighten them into submission (James, 1994).

In response to controversies and concerns about holding therapies the Association for the Treatment and Training in the Attachment of Children (ATTACH) was established in 1989. According to its website ([www.attach.org](http://www.attach.org)), ATTACH is an international coalition of parents, professionals and others setting out to increase awareness about attachment and its importance to human development, and to promote clinical education, training, research and standards for ethical practice. ATTACH does not reject physical touch or holding but rather delineates what members consider appropriate versus inappropriate use of physical contact [see Appendix A below for details].

## Treatment Models and Their Level of Empirical Support

### Treatments That Include Holding Therapy

The literature search revealed five different models of treatment that include holding therapy in way form or another.

1) The “**Welch Method Regulatory Bonding**” created by psychiatrist Martha Welch is among the earliest treatment models for RAD and was popularized through Welch’s book *Holding Time* (1989). Since 1977, **Welch Centers for Family Treatment** are located in New York and Connecticut and offer “Intensive Family Treatment Direct Synchronous Bonding,” a method that is also part of the Spaulding Adoption program at **Beech Brook**. The Welch Center website ([www.marthawelch.com/attachment\\_disorder.shtml](http://www.marthawelch.com/attachment_disorder.shtml), 2003) praises their methods as a breakthrough parenting strategy that revolutionizes both the way parents relate to their children and the way the child relates to the parents. The website specifies that interventions typically consist of interactive psychotherapy, including “the use of physical aids and nonverbal communication,” followed by insight oriented, cognitive behavior therapy and/or supportive psychotherapy.

Welch’s model is based on the assumption that RAD children and their mothers were denied positive mutual bonding experiences, and treatment is divided into three phases. The first phase is a two day intensive emergency stabilization that involves as many family members as possible and focuses on assessing the dynamics of family members’ attachment, severity of disturbances, and initiates bonding sessions. Direct synchronous bonding requires the mother (not the therapist) to forcefully hold the child on her lap throughout an expected time of the child’s resistance to being held. After the child’s resistance has passed a positive experience of mutual bonding is expected to follow. The second phase, lasting two to six months, requires weekly follow up visits to allow for parent training and reinforcement. The third phase offers participation in a family network who will mentor and support each other. **No empirical studies** evaluating the Welch method could be found in the search of data bases.

2) Treatment at the **Attachment Center at Evergreen (ACE)**, Colorado, provides an intensive combination of psycho-education, psychodramatic enactment, individual and family therapy, including holding practices. ACE treatment begins with a two week intensive (10 three-hour sessions on consecutive work days) involving the child, referring agency/parents, treating therapist, ACE therapist, ACE foster parent. The child lives with an assigned treatment family during the two week period. Parents spend time with foster parents to learn parenting tactics but have otherwise “minimal contact” with their child unless the child “is working hard enough in therapy to earn additional time” with parents (Myeroff & Randolph, 1997, p. 4). The four basic techniques are described as “cognitive restructuring,” “psychodrama,” “healing the inner child,” and “therapeutic holding” by therapist or foster parent. Following their two week intensive, the Attachment Center offers extended treatment (1 to 9 months) in therapeutic foster

care for some of their children. Psychiatrist Foster Cline was among the founders of attachment therapy at Evergreen. He left the ACE and moved to Idaho after being accused of gross negligence in the case of a holding therapy practiced under his supervision. The case was settled. With educator Jim Fay, Cline since founded the Love and Logic Institute that promotes child rearing strategies for parents and teachers of children with emotional and behavioral disorders (Bowers, 2004).

Only one peer-reviewed published outcome study (Myeroff, Mertlich & Gross, 1999) of ACE treatment could be located. The article describes results of a quasi-experimental study involving adoptive children with special needs (n=12), compared to a demographically similar, non-random control group (n=11). Six weeks after the above treatment, the treatment group showed statistically significant decreases in aggressive (p.<02) and delinquent behaviors (p<.006) as measured by the Child Behavior Check List (CBCL) while the control group did not. Limitations of the study include the small sample size, non-equivalent control group, and short timeframe for follow-up.

Another longer-term study by Myeroff and Randolph (1997) was published in a non-peer-reviewed monograph and involved children ages 7-12 (n = 21 for six months; n =14 for one year). Children received the two week intensive described above plus long-term treatment and therapeutic foster care for at least six months. Parents provided retrospective CBCL scores for the month prior to treatment, and foster parents at six and 12 month intervals. At six months children showed significant improvements (p<.05 or smaller) on six of eight CBCL subscales. The strongest improvements were noted for attention problems, followed by delinquent behaviors, aggressive behaviors, thought problems, anxiety/depression, and withdrawing behaviors. At 12 months the scores for anxious/depressed moods were the most improved category followed by thought problems, aggression, delinquent behavior and attention problem. The authors conclude that their results indicate consistent improvements whereby externalizing problems are the first to be affected and internalizing difficulties take a longer period to improve. However, this study lacks a control or comparison group making it impossible to discern if such improvements could have occurred through other means, including the passage of time.

3) Elizabeth Randolph (2001) is a proponent of a "Humanistic Attachment Therapy" which has evolved from the ACE model and emphasizes the idea that children with RAD equate being right (in control) with being loved/lovable. Like the ACE model, Humanistic Attachment Therapy uses holding practices only after having contracted with children and parents. As Randolph (2001) outlines, the child's consent is negotiated by having the child agree that 1) their life is not going well 2) that they are in part to blame 3) they are willing to work hard for change and 4) do so the therapist's way (meaning they agree to participate in interventions that are not previously known or explained to the child). Humanistic AT adds to the contracting a "free pass" phrase that the child can say when he/she wants therapy to end. Should the child not agree to all the points, the parents will inform him/her of the alternative living plans that are to be expected.

An effectiveness study included in Randolph's monograph presents results of a pre-post test of 25 RAD children who received two weeks of intensive humanistic AT, and twelve months of follow up therapy. Measures included the Rorschach test and the Randolph Attachment Disorder Questionnaire (RADQ). Results indicated statistically significant improvements, though there were no control or comparison groups.

4) Levy and Orlans (1998) promote "***Corrective Attachment Therapy***" developed by **Evergreen Associates**. Corrective attachment therapy consists of a combination of cognitive, emotional, and family systems therapy as well as parenting skills training, and a "Holding Nurturing Process" (HNP) during which the child is held in an infant nurturing position by the therapist and/or the parents. Presented as "not a technique but a relationship context" (p.114), the authors cite neurobiological research to claim that HNP promotes attachment behaviors by reducing trauma related alarm reactions and increases self-regulation, provides needed structure and facilitates a corrective experience.

An undated internet article by the same authors (Levy & Orlans, n.d.) presents a brief summary of pre-post test study of fifty children who participated in two weeks of Corrective Attachment Therapy. Measures included behaviors, emotions, cognition, relationships, physical symptoms, morality/ spirituality as reported by parents. Of the children, 84% were adopted, 46% were of a different ethnicity/race than their adoptive parents, 45% were adopted as part of a sibling unit, and 72% had one or more foster placement prior to adoption (averaging three prior placements). Ninety percent had experienced severe abuse prior to placement lasting an average of 48 months, 46% were forcefully removed against the wishes of their biological parents, and 34% had spent significant time in foreign orphanages. Ninety-two percent had an RAD diagnosis, 76% had multiples diagnoses. Parents reported more severe symptoms due to different cultural/ethnic backgrounds, the length of time spent in abusive situations, the number of years the child spent with biological parents, prior diagnosis of PTSD or other severe diagnosis other than RAD. Parents with secure attachment histories reported lowest the intensity of symptoms. For up to three years post treatment, the authors found significant improvements after treatment for all six measured categories. Stronger improvements were noted for children who had fewer prior moves in the foster care system, fewer pre-therapy diagnoses, were not adopted as a sibling unit, were not taking psychotropic drugs during treatment, and had an adoptive mother with a secure attachment history. The study lacked a control or comparison group, and many details necessary to judge the quality of the research and its instruments were not provided.

5) ***Dyadic Developmental Psychotherapy*** provides attachment therapy focused on increasing the reciprocity between caregiver and child. Dyadic Developmental Psychotherapy is promoted by the **Center for Family Development** in Williamsburg, New York and by *Daniel Hughes* of Maine. The website of the Center for Family Development (<http://www.center4familydevelop.com/developmentalpsych.htm>) presents this model somewhat differently than Dan Hughes does on his website (<http://www.danielahughes.homestead.com/Model.html>).



Claiming to be the only evidence-based treatment for attachment disorder, the Center for Family Development cites the Evergreen studies mentioned above as proof for the effectiveness of its own model (Becker-Weidmann, 2004). This self-representation leads the reader to assume that Dyadic Developmental Psychotherapy is, if not identical, than at least very similar to the kind of holding/attachment therapy practiced at ACE. Becker-Weidmann (2004) outlines five principles of treatment that are based on the assumption that the core and cause of RAD is trauma caused by significant and substantial experiences of neglect, abuse, or prolonged and unresolved pain in the first two years to three years of life: (1) therapy must be experiential because the disturbance is pre-verbal and RAD kids do not respond to other traditional forms of therapy; (2) therapy must be family-focused and focus on parents' capacity to create a safe and nurturing, being able to offer playfulness, love, acceptance, curiosity, and empathy (PLACE); (3) the trauma must be directly addressed so that the child can re-experience the painful and shameful emotions that surround the trauma so as to revise the child's personal narrative and world-view; (4) a comprehensive milieu of safety and security must be created at home and in therapy, good communication and coordination among home, school, and therapy is important; and (5) therapy is consensual and not coercive. The author emphasizes that provocative, coercive techniques or "compression wraps" have no place in treatment. At the same time, holding may be part of treatment in a cradling way but not in a restrictive, invasive, or constricting fashion.

Given how little certainty there is about the etiology or "core" of RAD and treatment outcomes, Becker-Weidmann's description of Dyadic Developmental Psychotherapy as practiced at the Center for Family Development is at best overly enthusiastic and self-assured in its claims about causes and treatment. Of the five principles, the necessity to "revisit" the traumatic event may be difficult to achieve when children's histories are not known, or when they were very young at the time of traumatization. Caution should be exercised with a mandate to "directly address the trauma" because there is significant research to show that pushing clients to explore trauma can effectually re-traumatize the victim (James, 1994).

Daniel A. Hughes' (2002) description of Dyadic Developmental Psychotherapy more clearly incorporates such concerns and integrates established principles of trauma treatment into his approach. Though his model may also include nurturing-holding, he moves further away from creating coercive situations or an emphasis on child obedience. In his view, directing children to address their past traumas must be done slowly to avoid both dysregulation (a state of affective distress causing out of control behaviors) on the one hand and defensive avoidance on the other. Avoiding dysregulation is described as a primary treatment goal. According to Hughes, providing more structure, reassurance, and options makes it more likely that the child will actively engage in treatment without affective dysregulation and has reduced the amount of holding children to ensure their safety. Hughes general principles for treatment and parenting are:

1. Eye contact, voice tone, touch (including nurturing-holding), movement, and gestures are actively employed to communicate safety, acceptance, curiosity,

playfulness, and empathy, and never threat or coercion. These interactions are reciprocal, not coerced.

2. Opportunities for enjoyment and laughter, play and fun, are provided unconditionally throughout every day with the child.
3. Decisions are made for the purpose of providing success, not failure.
4. Successes become the basis for the development of age-appropriate skills.
5. The child's symptoms or problems are accepted and contained. The child is shown how these simply reflect his history and how they need not be experienced as shameful.
6. The child's resistance to parenting and treatment interventions is also accepted and contained and is not made to be shameful by the adults.
7. Skills are developed in a patient manner, accepting and celebrating "baby-steps" as well as developmental plateaus.
8. The adult's emotional self-regulation abilities must serve as a model for the child.
9. The child needs to be able to make sense of his/her history and current functioning. The understood reasons are not excuses, but rather they are realities necessary to understand the developing self and current struggles.
10. The adults must constantly strive to have empathy for the child and to never forget that, given his/her history, s/he is doing the best s/he can.
11. The child's avoidance and controlling behaviors are survival skills developed under conditions of overwhelming trauma. They will decrease as a sense of safety increases, and while they may need to be addressed, this is not done with anger, withdrawal of love, or shame.
12. The child may be held at home or in therapy for the purpose of containment when the child is in a dysregulated, out-of-control state only when less active means of containment are not successful in helping him/her regain control, and only as long as the child remains in that state. The therapist/parent's primary goal is to insure that the child is safe and feels safe. The goal is never to provoke a negative emotional response or to scold or discipline the child. The model for this type of holding is that of a parent who holds an overtired, overstimulated, or frightened preschool child and helps him/her to regulate his distress through calm, comforting assurances and through the parent's own accepting and confident manner. (Hughes, 2002)

Hughes' list of "don'ts" include

1. Holding a child and confronting him/her with anger.
2. Holding a child to provoke a negative emotional response.
3. Holding a child until s/he complies with a demand.
4. Poking a child on any part of his/her body to get a response.
5. Pressing against "pressure points" to get a response.
6. Covering a child's mouth/nose with one's hand to get a response.
7. Making a child repeatedly kick with his/her legs until s/he responds.
8. Wrapping a child in a blanket and lying on top of him/her.
9. Any actions based on power/submission, done repeatedly, until the child complies.

10. Any actions that utilize shame and fear to elicit compliance.
11. "Firing" a child from treatment because s/he is not compliant.
12. Punishing a child at home for being "fired" from treatment.
13. Sarcasm, such as saying "sad for you", when the adult actually feels no empathy.
14. Laughing at a child over the consequences which are being given for his behavior.
15. Labeling the child as a "boarder" rather than as one's child.
16. "German shepherd training", which bases the relationship on total obedience.
17. Blaming the child for one's own rage at the child.
18. Interpreting the child's behaviors as meaning that "s/he does not want to be part of the family", which then elicits consequences such as:
  - A. Being sent away to live until s/he complies.
  - B. Being put in a tent in the yard until s/he complies.
  - C. Having to live in his/her bedroom until s/he complies.
  - D. Having to eat in the basement/on the floor until s/he complies.
  - E. Having "peanut butter" meals until s/he complies.
  - F. Having to sit motionless until s/he complies.

Giving the above consequences in a "loving, friendly tone" does not make them appropriate. That tone may actually cause greater confusion about the meaning of love, parenting, and safety which we want children to understand. (Hughes, 2002)

**In summary**, although Evergreen associated authors point out that invasive or coercive holding practices are not used by therapists at ACE and others following the ethics guidelines of ATTACH (see Appendix A. for details), softened versions of the same techniques of holding or wrapping are still employed either with a neurobiological rationale, or with the intent of releasing emotions after having "negotiated consent." The negotiation or contracting process described by Randolph (2001) to receive this consent requires children to agree that they will trust a therapist before they get to know him/her while threatening that they will otherwise have to leave their parents. Although it may be necessary for families to think of other living arrangements, and let children know about it, the strategic inclusion of this possibility in the negotiation can hardly result in children's true consent.

Overall, while testimonies and small studies indicating improvements should not be ignored, they should not be presented as scientific proof of the efficacy and validity of a practice like holding therapy. The preliminary evidence of the Evergreen studies provides little validation for the use of such a controversial intervention (Wilson, 2002, p.48). At the same time, controlled studies of holding therapies are unlikely to be funded since research proposals involving such intense physical contact with children do not pass Institutional Review Boards, and because dangerous practices of some individuals have raised barriers (Dozier, 2003; Minnis & Keck, 2003). Therefore, authors recommend borrowing less invasive approaches that have been validated for children who have been abused or neglected (Hanson & Spratt, 2000; James, 1994) and emphasize thorough

assessment, establishing measurable goals, ensuring safety and maximize trust, stabilizing crises, setting boundaries, working directly with the caretaker, focusing on child and family coping rather than inferred pathologies, and maintaining the child in least restrictive and least intrusive level of care.

## **Trauma Treatment Approaches**

In her *Handbook for Treatment of Attachment-Trauma Problems in Children*, James (1994) offers insights into the complexity and richness of the field with contributions from professionals, families, and children. James presents a variety of possible causes for attachment trauma including the loss of caregivers due to prolonged illness, death or war. She lists five conditions as treatment essentials: (1) safety from threatened or actual harm; (2) a protecting environment allowing the exploration of psychologically frightening experiences; (3) therapeutic parenting; (4) clinical skills in the areas of child therapy, attachment, development and trauma; and (5) a therapeutic relationship that allows the gradual growth of trust and is not seduced by ideas of "sudden breakthroughs." Adopting a breakthrough ideology runs the risk that the search for the perfect, clever intervention becomes the center of clinical activity at the expense of valuing unique relationship with the individual child (James, 1994). Therefore, James promotes treatment approaches that rely on more established (but not evidence-based? James herself does not provide any information as to evidentiary status of the treatments. I suppose some of them have been researched to some degree) courses of trauma treatment including dramatic and developmental play therapy, or drama therapy, emphasizing the integration of knowledge about attachment, trauma and development, as well as the diversity and strengths of families and children.

Burkhardt-Mramor (1996) of the Beech Brook Center, Ohio, also presents a case study describing the treatment of an 11-year-old boy through music therapy. The author suggests that music therapy may be a less threatening model of therapy for children with attachment disorder because it creates opportunities for relationship-building and reciprocity by capitalizing on children's curiosity and interest in musical activity.

***Eye Movement Desensitization and Reprocessing (EMDR)*** is a treatment modality developed in the late 1980s for trauma victims, specifically those who exhibited symptoms of post traumatic stress (PTSD) and involves bilateral stimulation of the patient's brain to enhance the desensitization toward traumatic memories and the replacement of negative cognitions with positive ones (Rubin et al., 2001). Studies evaluating the effectiveness of EMDR with adult patients have produced mixed results. Supportive outcomes were noted for the treatment of relatively circumscribed traumatic events. (Rubin et al., 2001). Although proponents of EMDR recommend the method for children (Tinker & Wilson, 1999; Greenwald, 1998) there are still very few rigorous studies of EMDR with children or adolescents which, taken together, produced mixed findings (Rubin et al., 2001). Taylor (2002), for instance, presents a case study of an eight year old adopted girl who was treated with two sessions of Eye Movement Desensitization and Reprocessing (EMDR), accompanied and followed by supportive

family therapy. The usual EMDR protocol was modified to focus on feelings of happiness and security (rather than on traumatic events which remained unknown) and to engage a child rather than an adult. Parents received supportive and educational therapy. After the first session the mother and teachers reported positive changes in the girl's behaviors. The girl's behaviors toward the father changed from ignoring and being non-responsive to being more challenging and oppositional. A positive reframe of the change allowed the father to be more tolerant of the new engagement style. Twelve months post the EMDR treatment (family therapy had continued after EMDR) mother, child, and school reported the maintenance of positive development. While this report presents an interesting and apparently successful use of EMDR as one element of RAD treatment, the treatment package approach makes it difficult to determine if EMDR was the effective treatment element in this case. The use of EMDR with RAD children should be viewed cautiously without empirically sound replication of this success.

A study by Rubin et al.(2001) raises doubts about proponents' claims to rapid or dramatic effects of EMDR on children who, like RAD children, did not suffer from a circumscribed traumatic event but from lasting, more complex traumatic experiences at an early, pre-verbal age. Rubin et al. (2001) conducted a small study into the effectiveness of EMDR as an added component to routine child treatment at a Child Guidance Center. The experimental study involved 39 children between the ages of six and fifteen who were diagnosed with a range of emotional and behavioral disorders. The treatment of children required multiple improvisational deviations from EMDR protocols because children resisted the therapist instructions such as following hand movements, or discussing negative memories or thoughts. Results indicated that compared to the routine treatment control group the experimental group did not show statistically significant differences on internalizing or externalizing scores of the CBCL. The author concludes that further research is needed to support possible effectiveness of EMDR for children with complex emotional or behavioral difficulties.

## **Residential Treatment**

Because of the severity of their symptoms, some RAD children are also treated in residential facilities or inpatient psychiatric hospital units. Some treatment centers, like Cedar Springs Behavioral Health Systems, in Boulder, Colorado, advertise specialized residential programs for children with RAD ([www.reactiveattachment.com](http://www.reactiveattachment.com)).

Ziegler (1994) describes the small residential program of Jasper Mountain, Oregon, where children are placed in a family context with parents who are professionals. Founded in 1982, Jasper Mountain offers an intensive, long-term treatment program for children who have experienced severe abuse and neglect. Specializing in trauma, attachment, sexuality and life-skills development, Jasper Mountain's program combines environmental intervention (including diet, architecture, no commercial TV etc.), behavior management, psychotherapy (family and individual treatments including play and art therapy), and interventions aimed to increase self-esteem (including biofeedback, creative arts, video feedback etc.). The program does not promise success and does not

consider children “cured” when they leave. Ziegler rejects notions of “holding” as a quick way to establish bonding after a short period of time and insists learning reciprocity takes years. No empirical studies about the programs’ effectiveness could be located.

The Amherst Wilder Foundation has plans to create a small residential facility for children with severe RAD ([www.wilder.org/programs/HealthYouth/RAD.html](http://www.wilder.org/programs/HealthYouth/RAD.html)). According to their website the residential facility will use a multi-sensory therapy approach and house four to six children ages 5 to 12 for a year or more, based on the child's need and progress. The facility is conceptualized with a live-in "house parent" model of staffing, supported by child care staff and overseen by a therapist. No further information on the status of the project could be obtained. Other planned activities of the foundation include developing and providing training for staff, foster parents, caregivers and professionals who work with children with RAD, establishing a prevention program for teenage mothers with RAD who are at risk of not bonding with their babies, and furthering public policy and research efforts on local and national levels.

This review of the literature produced no studies on the effectiveness of residential or inpatient treatments for RAD children, so there is no empirical evidence to suggest that these are any more effective than outpatient treatments. Also, given the overlap of RAD symptoms with those of children with conduct disorder, and the link between disturbed attachment and disturbances in social development (Allen, Hauser & Borman-Spurrell, 1996; Cooper, Shaver, & Collins, 1998), there is currently little reason to conceptually favor residential treatment for RAD children. Residential care and inpatient treatment have not been shown to be effective approaches for children diagnosed with conduct disorder and other related conditions. (See Best Practice Reports #1 and #3). As with other conditions and diagnoses, it is recommended that inpatient or residential treatment be pursued only after all community-based options have been shown ineffective, and/or in the event of danger of harm to self or others.

## Summary

Undeniably, attachment is a promising concept and its ongoing and future exploration will continue to further the understanding and treatment of a variety of psychiatric difficulties. However, there is to date significant controversy among professionals about the etiology and definition of attachment difficulties, as well as questions about the validity of criteria currently summarized under the diagnosis of Reactive Attachment Disorder. In addition, there is scant empirical evidence to support controversial forms of treatment, including holding therapy. Based on the extensive literature review provided above, the following are recommended as current best practices in this arena.

**Assessment** best relies on multiple sources, such as parent reports, school reports and observations, to determine if, and what kind of, attachment problems are present. Assessments should include history of treatment, psychological and social development, education, trauma and medical history, intellectual and cognitive skills, family functioning as well as breaks and disruptions in the continuity of caregivers. Since attachment is an interactive concept, assessments should include repeated observations of interactions with caregivers as well as appraisals of caregivers' attachment styles. Observing single episodes of interaction is not sufficient. Some assessment tools have been developed to aid in assessment, with the Randolph Attachment Disorder Questionnaire (RADQ) (Randolph, 2001) appearing to be the best researched to date.

Regarding **treatment**, no particular treatment method has shown to be effective with RAD children (O'Connor & Zeanah, 2003). Although there have been a few, mostly non-published studies of the positive effects of treatments that include holding therapy, these lacked sufficient samples, comparison groups, and follow-up. Thus, despite the claims of some proponents, firm conclusions about effectiveness cannot and should not be made. This applies to both outpatient and residential treatment.

In light of significant concerns about effectiveness and ethics of holding therapies, best clinical practices for children diagnosed with RAD are guided by principles of trauma treatment and abstain from holding the child for purposes other than immediate safety. Although the national ATTACH organization supports non-coercive holding, it remains a matter of interpretation where "therapeutic" or "nurturing" holding ends and coercive practices begin. Because of the risk of causing harm through traumatization or re-traumatization, holding therapies should be avoided in favor less intrusive methods.

Attachment based interventions should aim to improve the caregiver's capacity to serve as a secure base, and to increase reciprocity or attunement of child and caregiver. It stands to reason that such interventions can be offered without routinely engaging in holding practices when therapists are appropriately trained and can modify established methods of child therapy to meet the specific needs of a client. Treatment should ensure the child's physical and emotional safety, avoid dysregulation, and support, involve,

educate and train caregivers so that reciprocity/ attunement between caregiver and child can be increased. Because of the interactive nature of attachment, therapists should not only be educated and trained in the areas of child development, trauma, attachment, and family therapy but also be attuned to their own strengths and weaknesses regarding interpersonal attachments.



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## **Reactive Attachment Disorder: Concepts, Treatment, and Research**

### **Introduction**

In recent years, the diagnosis of “Reactive Attachment Disorder” (RAD) has received increased attention in professional as well as public circles. On the one hand, the concept of disordered attachment holds promise for understanding and eventually alleviating the challenging behaviors of some children with traumatic histories of abuse or neglect. On the other hand, current definitions of RAD as well as controversial treatment protocols have led to significant concerns, criticism, and confusion. This interest in the theory, diagnoses and treatment of attachment disorders has not been matched by empirical investigations, especially for assessment and treatment (O'Connor & Zeanah, 2003). This lack of knowledge is exacerbated by substantial differences among professionals about how phenomena are best defined. The way in which attachment concepts are used in clinical practice and research today does not always correspond with the original theoretical conceptualizations, and definitions used among professionals do not always correspond with current diagnostic definitions in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) or the International Classification of Diseases (ICD-10) (O'Connor & Zeanah, 2003).

In a recent publication, Howard Steele (2003) concluded,

“The concept of attachment disorder, how it is assessed, and what diagnostic guidelines are most helpful/valid/reliable remains a matter of some debate, and is in urgent need of research. To date, there is no systematic evidence-based approach for treating children with attachment disorders, and the very concept of ‘attachment disorders’ remains controversial due to substantial questions about assessment and diagnosis.” (p. 219).

The following review of national, and some international, literature was conducted in order to determine the state-of-the-art knowledge about Reactive Attachment Disorder and its treatment. Specific attention was given to the question “What is the appropriate place for “holding therapies” in treatment?”. The review is based on systematic searches of relevant databases (PubMed, PsycInfo, WilsonWeb, Social Work Abstracts, and Exceptional Children) as well as books and internet sources. (Abstracts of twenty-six published articles and books are included in Appendix B.) This report is organized according to the following sections: concepts, assessment, treatment overview, treatment models and their empirical support, and summary.

## Concepts

### Conceptual Roots

The diagnostic category of “Reactive Attachment Disorder” (RAD) has its conceptual roots in the attachment theory posited by John Bowlby (1969, 1973, 1980) and Mary Ainsworth (1969). During the 1960s and 70s, Bowlby and Ainsworth conducted landmark research on the dyadic behaviors of small children and their caregivers to study how children developed a sense of physical and psychological security. Bowlby defined “attachment behaviors” as those behaviors children display to seek and initiate proximity to their caregivers during times of stress (Bowlby, 1988). Bowlby and Ainsworth hypothesized that the attachment styles developed in infancy become internalized as representations, which then serve as working models, or expectation templates, for later relationships in adolescence and adulthood. These working models reflect “the child’s appraisal of, and confidence in, the self as acceptable and worthy of care and protection, and the attachment figure’s desire, ability and availability to provide care and protection” (Solomon & Carol, 1999, p. 5). Bowlby and Ainsworth conceived of attachment as a dynamic process that is interactive and intersubjective. In other words, attachment is neither an entity residing solely within the child nor something simply transmitted by a caregiver. Rather it is a dynamic development between child and caregivers, resulting in a complex system of behaviors, cognition, and emotions.

Using a series of experiments during which infants were first separated and then reunited with their caregivers, Bowlby and Ainsworth (Bowlby, 1969, 1973, 1980; Ainsworth, 1969) identified two basic types of attachment behaviors: *secure* attachment and *insecure* attachment. Securely attached children have developed an expectation of care and protection should it be necessary and can engage with the world with sufficient trust. They use their caregiver as a “secure base” from which to explore the world. Insecurely attached children seem uncertain whether they will be afforded protection or care when they need it because caregivers are perceived as only inconsistently available, entirely unavailable or rejecting. These children seem to miss a secure base and engage with the world by either withdrawing from it or attacking it. Bowlby and Ainsworth further discriminated between *two insecure behavior subtypes*: 1) *insecure avoidant* behaviors during which children physically and affectively avoided the caretaker upon his or her return, and 2) *insecure dependent or ambivalent* behaviors when children display conflicting, or highly immature behaviors toward the caregiver.

For children whose attachment seems problematic, but who show no clear coherent pattern of avoidance or ambivalence upon reunion with caregivers, Main and Solomon (1990) more recently offered the term *disorganized attachment*. Disorganized attachment describes a wide array of odd, contradictory or fearful responses of children who seem unable to create a lasting response strategy in separation-reunion situations. The authors hypothesized that disorganized attachment patterns may stem from prolonged adverse separations of children from their caregivers, or from their experience of the caregiver as frightening or frightened, and as unable or unwilling to provide care or

resolution. As a result, behaviors, thoughts and emotions remain unintegrated, and likely put these children at risk for future psychological disorders such as depression, conduct disorder etc. (Solomon & Carol, 1999; Lyons-Ruth, 1996). It is important to note, however, that not all insecure attachments are automatically disordered. While attachment classified as “disordered” is always insecure, most insecure attachment behaviors are not disordered (Zeanah, 1996).

### **Definition**

The Diagnostic and Statistical Manual (DSM-IV, American Psychiatric Association, 1994) defines the criteria for a diagnosis of Reactive Attachment Disorder (RAD) as follows,

- A. Markedly disturbed and developmentally inappropriate social relatedness in most contexts, beginning before age 5 years, as evidenced by either (1) or (2):
  - (1) persistent failure to initiate or respond in a developmentally appropriate fashion to most social interactions, as manifest by excessively inhibited, hypervigilant, or highly ambivalent and contradictory responses (e.g., the child may respond to caregivers with a mixture of approach, avoidance, and resistance to comforting, or may exhibit frozen watchfulness)
  - (2) diffuse attachments as manifest by indiscriminate sociability with marked inability to exhibit appropriate selective attachments (e.g., excessive familiarity with relative strangers or lack of selectivity in choice of attachment figures)
  
- B. The disturbance in Criterion A is not accounted for solely by developmental delay (as in Mental Retardation) and does not meet criteria for a Pervasive Developmental Disorder.
  
- C. Pathogenic care as evidenced by at least one of the following:
  - (1) persistent disregard of the child's basic emotional needs for comfort, stimulation, and affection
  - (2) persistent disregard of the child's basic physical needs
  - (3) repeated changes of primary caregiver that prevent formation of stable attachments (e.g., frequent changes in foster care)
  
- D. There is a presumption that the care in Criterion C is responsible for the disturbed behavior in Criterion A (e.g., the disturbances in Criterion A began following the pathogenic care in Criterion C).

### **Critique of the DSM Definition**

The current DSM definition of RAD is not without its critics. Zeanah (1996) as well as other authors (Werner-Wilson & Davenport, 2003; Hanson & Spratt, 2000; O'Connor & Zeanah, 2003) contend that RAD is too narrow a conceptualization that is validated neither empirically nor theoretically. In a thorough critique of RAD definitions, Zeanah (1996) argues that the term ‘reactive’ was merely an attempt to differentiate RAD

from Pervasive Developmental Disorder (PDD) which can present with similar symptoms. While PDD was thought to have organic causes, RAD was conceptualized as a functional impairment brought about by adverse rearing conditions. Yet, this dichotomy of organic versus functional holds very little value given research findings about the interactive nature of social factors and brain development. In this way of thinking, RAD is no more or less “reactive” than other psychiatric disorders, and children with PDD may very well also suffer from attachment disturbances.

In addition, RAD conceptualizations are inconsistent with Bowlby's and Ainsworth's concepts which are based on child-caretaker interactions (Zeanah, 1996) while current RAD criteria refer to more than primary caregiver attachment and include disturbances in the child's social abilities and relationships across contexts. The cutoff at five years of age lacks empirical validation as does the criterion of pathogenic care as a necessary or sufficient factor for RAD (Hanson & Spratt, 2000). By definition, children with RAD must have experienced “pathogenic care,” i.e. abuse or neglect, or repeated changes of primary caregivers which prevented the formation of stable attachments. This definition means that all children who have been abused or neglected automatically meet this criterion leading to a possible overdiagnosis of RAD in this population (Hanson & Spratt, 2000).

O'Connor & Zeanah (2003) proposed the concept of an “attachment spectrum” that ranges from “secure forms” to “ordinary forms of insecure attachments” to “disorders of non-attachment” whereby only the latter usually describes what is meant by attachment disorder, and RAD, today. Behavioral indicators of insecure attachment (such as lack of affection or indiscriminate affection toward strangers, absent, odd, ambivalent or excessive comfort seeking, excessive inhibition in exploration or exploration without checking back etc.), can be seen in healthy children as well and should become clinical indicators only when these behaviors seem extreme patterned behaviors toward parent figures (Zeanah, 1996).

Hanson and Spratt (2000) also contend that the DSM fails to capture and distinguish various other clinical presentations of RAD including disorganized, avoidant, and resistant attachment behaviors. The DSM distinguishes only two subtypes of RAD, the disinhibited, and the inhibited type. Children who are inhibited persistently fail to initiate or respond to relational engagement appropriately. Those who are disinhibited typically display indiscriminate familiarity with strangers (Hanson & Spratt, 2000). While both types are described in the literature, there is more consistent validation for the disinhibited subtype while the inhibited form is rarely addressed (O'Connor & Zeanah, 2003). The inhibited category in particular does not match research results on secure/insecure/disorganized attachment behaviors making research and validation of this subtype difficult (O'Connor & Zeanah, 2003).

A study by Minnis, Rabe-Hesketh, and Wolkind (2002) somewhat validated the categorization of inhibited and disinhibited subtypes. The study reports results of the development and testing of a 17-item questionnaire for RAD children in 121 families in Central Scotland. The authors found four main factors that accounted for a total of 94%



of the variance in the sample. Cluster analysis showed that these factors fell into three clusters, one corresponding to the disinhibited type of AD, one corresponding to inhibited type, and one in which children did not seem to suffer from RAD. However, some factors in the questionnaire showed significant overlap of items which appeared to apply to both subtypes.

### **Prevalence and Etiology**

Though RAD is believed to be very uncommon, there are no epidemiological data to examine the prevalence or course of RAD (Hanson & Spratt, 2000). Based on maltreatment research, prevalence rates have been estimated at 1% of all children (Hall & Geher, 2003), but as Hanson and Spratt (2000) point out, it is problematic to base estimates of RAD rates on the prevalence of abuse or neglect. Even though pathogenic care is by definition the assumed primary factor, etiologically no one leading cause of disturbed attachment is known. Not all children who experience abuse or neglect develop attachment problems, and some behavioral symptoms of RAD may occur without the presence of pathogenic care.

An exploratory study by O'Connor and Rutter (2000), for instance, evaluated the impact of early severe deprivation on the attachment behaviors of 165 Romanian children adopted in the United Kingdom and 52 comparison adoptees born in the UK. The authors found an association between early deprivation and the occurrence of attachment disorders (AD). However, the link seemed complex and deprivation appeared not as a singular cause for AD. Seventy percent of children who had been exposed to severe deprivation of more than two years did *not* exhibit marked attachment problems. The authors conclude that "grossly pathogenic care is not a sufficient condition for attachment disorder behavior to result" (O'Connor & Rutter, 2000, p. 710). At the same time, disturbances were evident even when the deprivation was limited to early months in life leading the authors to wonder if severe early deprivation (even less than 6 months) may have long-term effects on attachment behaviors. It seems that the time and duration of attachment disruption may be related to the severity of subsequent disturbances. The earlier and the more prolonged the disruption the more severe the subsequent disturbance. Study results indicated no decrease of RAD symptoms over a two-year period.

Other contributing risk factors include domestic violence, parental substance abuse or teenage parenthood (Hanson & Spratt, 2000). Like trauma and maltreatment, attachment disruption is likely to affect the development of neurological pathways. Biological factors such as temperament or prematurity are, in turn, likely to affect attachment (Hanson & Spratt, 2000).

Cultural aspects of attachment and cross-cultural comparisons are only beginning to be studied. A Canadian project named "Attachment across cultures" was developed to support service providers in promoting positive cross cultural attachment practices. (See website at <http://www.attachmentcrosscultures.org>). The authors (Reebye, Ross, and Jamieson) point out that one of the complexities of cross-cultural research is that it must recognize that infants and children learn to behave in a manner conducive to their

successful adaptation within the cultural norms around them. The infant behaves in a manner that responds to maternal behavior that is both intuitive and reflective of expected behavior in the community. Thus, attachment behaviors may look different in different cultures.

## **Assessment**

Currently, there is no gold standard for the assessment of attachment disorders in general, or Reactive Attachment Disorder in particular (O'Connor & Zeanah, 2003). Usually, children and adolescents are not referred to mental health services for attachment problems per se but because of behavioral difficulties such as attention problems, difficulties with peers and families, aggression and so forth (Byrne, 2003). On the other hand, referral biases for abused/neglected children may lead to significant overreporting and require a clearer distinction of core RAD symptoms from other co-occurring problems (Byrne, 2003). This distinction, however, is difficult to achieve because RAD symptoms may overlap or be confused with symptoms of Posttraumatic Stress Disorder (PTSD), Pervasive Developmental Disorder (PDD), childhood depression, anxiety, attention deficit disorders (ADD/ADHD), reactive aggression of maltreated children, or conduct disorder (Hanson & Spratt, 2000). The DSM emphasis on behavioral difficulties has invited the expansion of symptom lists for the purpose of assessment. These lists often extend far beyond the initial criteria resulting in a "laundry list" of behaviors that may more appropriately be identified with other diagnoses or by the range of temperaments (Hanson & Spratt, 2000; O'Connor & Zeanah, 2003).

Minnis, Rabe-Hesketh, and Wolkind (2002) found that behavioral descriptors in their questionnaire did not always distinguish disordered behavior from behaviors of an immature or anxious but otherwise normal child. Results of their study indicated a statistically significant association of RAD with a history of sexual abuse but did not reveal any directionality. In other words, it remains unclear if sexual abuse was part of the pathogenic care thought to cause RAD or if disinhibited RAD children were more vulnerable to sexual abuse. The authors concluded that it remains difficult to identify core symptoms of RAD that clearly distinguish this diagnosis from others. Future research will need to establish the developmental course of RAD and answer the question where insecure attachment styles end and attachment disorders begin (Minnis, Rabe-Hesketh, & Wolkind, 2002).

Assessments best rely on various sources including systematic observations, interviews, questionnaires and assessment of social cognition (although existing instruments may not be specific enough) (O'Connor & Zeanah, 2003). No single instrument, and no observations of single interactions cannot accurately reflect the quality of attachment, and behavioral descriptions alone may not be sufficient to assess children of preschool age or older (Whitten, 1994). Insofar as caregivers are part of the attachment dynamic, using caregiver reports alone to diagnose is also, at least potentially, problematic (Minnis, Rabe-Hesketh, & Wolkind, 2002).

Marvin and Wheelan (2003) from the Parent-Child Attachment Clinic at the University of Virginia emphasize that clinical assessment protocols should be responsive not only to child and parent characteristics but to the *interaction* of parent and children. Because of the strain parents frequently experience, they may display disengaged, frustrated relations to the child. This parental behavior can be mis-read by clinicians as the source of the disturbance when it is a reaction to pre-existing attachment problems.. Protocols should be guided by strengths and limitations of empirical data, and consistent with clinical standards relying on convergent data from multiple sources and procedures including record review, open ended interviews with parents, children (if old enough), and professionals, standardized questionnaires, video-taped free play, strange situation or other appropriate separation-reunion situation followed by parental behavioral management (like cleaning up toys), doll story completion, or for children age 14 or older the Adult Attachment Interview (Marvin & Wheelan, 2003).

Whitten (1994) uses the assessment to differentiate between attachment behavior patterns and trauma-bond behavior patterns. The former follow the objectives of safety, exploration, avoiding danger and affiliation, while the latter have as objectives the well-being of the adult, regulating intensity of feelings, limited interaction and safety. Adult reports and child self-report checklists, direct observation and projective techniques (such as Achenbach Child Behavior Checklist, CBCL; MIM, kinetic family drawing etc.) serve as standard assessment instruments to answer such questions as:

- Under what conditions is the child compliant?
- Who regulates the intensity of feelings in the parent-child interaction?
- Does the adult help the child function more independently?
- Under what conditions does the child explore?
- How does the child use the adult in the exploration?
- How does the adult support or hinder exploration? (Whitten, 1994)

Assessment at the Attachment and Bonding Center (ABC) in Ohio consists of biographies of the parents and the child written by the parents, clinical assessment of the family and the child individually, including observation of the child with family and strangers, as well as school reports (Minnis & Keck, 2003). Assessment measures of the Spaulding Adoption program at Beech Brook, Ohio, include the Beech Brook Attachment Disorder Diagnostic Questionnaire, the Devereux Scale of Mental Disorders (DSMD), art therapy assessments and a family scale (Moss, 1997). The Beech Brook Questionnaire is a checklist tested only with a clinical sample of 101 children but not with non-clinical samples. Statistical analysis of the pilot study resulted in two dimensions: positive (healthy) and negative (pathological) attachment (Moss, 1997). No larger scale study examining reliability or validity of the instrument could be located in the peer reviewed literature.

In addition to symptom checklists (Levy & Orlans, 1998; Fahlberg, 1991), a few assessment instruments for RAD have been described in the literature. These include 1) the 30-item Randolph Attachment Disorder Questionnaire (RADQ) (Randolph, 2001), 2) a 17-item questionnaire developed in Scotland (Minnis, Rabe-Hesketh, & Wolkind, 2002), and 3) the Reactive Attachment Disorder Scale (RADS; Hall & Geher, 2003)

consisting of 74 items. The RADQ (Randolph, 2001) is a Likert-type scale asking the caregiver to indicate the severity of particular child behaviors. According to Randolph (2001) the RADQ is supported by extensive validity and reliability research. A known limitation of the instrument is its susceptibility to distortion by parents who may over- or underestimate their child's behaviors. Therefore an evaluator usually administers the RADQ item by item. The Scottish RAD questionnaire (Minnis, Rabe-Hesketh, & Wolkind, 2002) was developed to measure both the inhibited and disinhibited subtype of RAD and was administered to foster parents. Though the questionnaire has good test-retest and interrater reliability, it was only tested only with a small sample (n=121). Cluster analysis showed significant overlap of items which means that some items did not sufficiently capture differences between inhibited and disinhibited RAD symptoms. The Reactive Attachment Disorder Scale (Hall & Geher, 2003) was developed for a specific research study and specified behavioral symptoms based on the DSM-IV criteria. Tested only with a small sample, the RADS showed sufficient reliability and convergent validity with subscales of the Child Behavior Checklist (CBCL). Factor analysis showed that the RADS produced only one interpretable factor accounting for general behavioral problems. The other factors did not seem particularly meaningful or powerful. In sum, at this point only the RADQ seems a sufficiently researched instrument. Details about the RADQ are available in Randolph (2000) *Manual for the Randolph Attachment Disorder Questionnaire-RADQ*, (3<sup>rd</sup>. Ed.) Evergreen, CO: The Attachment Center Press.

## **Treatment Overview**

To date, there are no empirically validated treatments for Reactive Attachment Disorder (Hanson & Spratt, 2000; Steele, 2003, O'Connor & Zeanah, 2003). Studies about treatment effectiveness are still relatively rare, and frequently lack appropriate controls or large sample sizes (Hanson & Spratt, 2000; Wilson, 2001). O'Connor and Zeanah (2003) grouped existing treatment approaches into four main fields: family support and parent training; socio-cognitive interventions; attachment-based interventions; and holding therapies. A fifth set of approaches relies on practices developed for the treatment of trauma. Many of the models currently promoted use a mixture of components.

### **Family Support and Parent Training**

Alleviating parents' frustration and stress is often a legitimate part of treatment although carryover effects to children are not clear. As with other treatments, some behavioral improvements (not wandering off with strangers etc.) can be achieved, but it remains unclear whether these changes correlate with actual improvements in attachment to the caregiver (O'Connor & Zeanah, 2003). Anecdotal evidence also suggests that parent groups may be an effective model, including networks via the internet (O'Connor & Zeanah, 2003). It is not yet clear how adoptive or foster parents are best involved in treatment but most treatment models include families in their interventions (Levy & Orlans, 1998; Minnis & Keck, 2003). Respite care may be useful to relieve familial stress; however, there are concerns about the appropriateness of this service for RAD

children who are least likely to cope well with repeated separations (O'Connor & Zeanah, 2003).

A small study in Turkey evaluated 15 RAD children (ages 24-45 months) whose parents participated in parent education and training. The treatment aimed at improving the parenting skills and provided three months of weekly parent education and training in emotional, social and language development, managing stereotypical behaviors, self-care, addressing feelings of guilt, and involvement in child-directed play activities. Measures included pre- and postnatal physical and psychiatric symptoms through retrospective interviews of the mother, retrospective temperament assessment, familial caregiving patterns, TV viewing habits, developmental assessments, and behavioral observations of child-caregiver interactions. Data indicated that 66.7% of pregnancies were unplanned. Forty-seven percent of mothers had severe anxiety or depressive symptoms during pregnancy, and 53% of mothers reported depressive symptoms after delivery leading the authors to suggest that maternal depression may be an etiological factor for tendencies to neglect the child or fail to respond to the child appropriately. Subjects in this study are a somewhat unusual RAD population in that they were not adoptees or foster children, but lived with their own families. Only few had experienced recurrent changes of caregivers. One finding concerned the amount of TV watching. Children watched an average of 7.26 hours per day which authors considered an indicator of emotional neglect. The mean age of beginning to watch TV was 7 months. After three months of treatment, improvements were noted for language and communication development, aggressive behaviors, stereotypical behaviors, and agitated behaviors. Since there was no control or comparison group, the effectiveness of the parent education/training could be accounted for by other factors including natural maturation.

### **Socio-Cognitive Treatments**

**These** target the behaviors and thinking patterns that underlie and/or accompany attachment disorders. They are, however, not yet specifically targeted to or validated for children with attachment disorders (O'Connor & Zeanah, 2003). Generally, this approach involves cognitive and behavioral modification interventions commonly used for the treatment of children with emotional or behavioral difficulties.

### **Attachment-based Interventions**

This type of intervention derives from attachment theory and target real-life interactions between infants and caregiver. Aiming to facilitate the caregiver's capacity to serve as a secure base, they usually focus on the sensitivity and response of the caregiver. This model does not account for disordered attachment behavior of children whose caregivers seem adequately sensitive (O'Connor & Zeanah, 2003).

Based on his clinical experience, Hughes (2003), for instance, outlines seven principles of treatment and parenting intended to increase the attunement of caregiver, therapist and child:

1. Therapist and caregiver must themselves be autonomous (secure) in their attachment strategies because they are to co-regulate the child's affect and co-construct the meaning of the child's experiences. With a sufficiently secure caregiver, the therapist facilitates parent-child interactions, and secures parents' comfort and support in the process. If the parents themselves seem not sufficiently resolved about their own attachment history, an initial separate period of individual treatment for parent and child is recommended.
2. Caregivers and therapist must assume an active, intersubjective approach (attunement) in which the child's experience is made clear. The parent's understanding of the child's inner life becomes a way for the child to understand and eventually regulate the experiences.
3. Caregiver and therapist need to make their own experiences of the child very obvious (even in exaggerate non-verbal ways like one communicates with infants or toddlers) because abused and traumatized children often mis-read non-verbal cues or misinterpret signs.
4. Therapist and caregiver maintain interpersonal emotional tone of acceptance, empathy, curiosity, playfulness, sensitivity, responsiveness and availability, matching the communication of child and adult.
5. Conflicts and misattunements are directly addressed with efforts to repair the immediate experience (counteracting shame and fear frequently felt by children with traumatic histories)
6. When children experience stress or other dysregulations of affect they are brought closer to the caregiver (unless the caregiver is dysregulated) who will provide the regulation and modeling. It is central for parents to be able to maintain a vision of the child's inner strength and potential to become more adaptive.
7. Caregiver and therapist employ cognitive and behavioral treatment strategies. These strategies follow, not precede, states of attunement, interpersonal motivation, and meaning-making.

To repeat, there have been no published empirical studies of this approach.

### **Holding therapies**

Because of the considerable controversy surrounding "holding therapies," it is prudent to emphasize that not all procedures called "holding therapy" are alike. As James (1994) explains, some therapies called holding therapy, attachment therapy or rage therapy include coercive methods including prolonged restraint for purposes other than the safety of the child, prolonged noxious stimulation such as tickling, prodding, poking, and provoking, or interference with bodily functions such as breathing. These same terms, however, are sometimes employed for practices that are not coercive, making it necessary to take a close look at the theory and practices described for various models.

Neurophysiological research certainly supports the importance of touch in the healthy development of children (Levy & Orlans, 1998; Minnis & Keck, 2003). That is, touch is necessary for healthy development of the brain and general health of a child. Still, the question who should hold or touch whom, when, and how in order to facilitate

successful attachment is not as easily answered as some proponents of holding therapies seem to suggest.

***Proponents of holding therapy*** claim its effectiveness and contend that physical holding of the RAD child provides a necessary experiential, pre-verbal component of treatment that allows a healthy re-attachment to replace previous unhealthy attachments patterns (Randolph, 2001; Myeroff, Mertlich & Gross, 1999; Levy & Orlans, 1998; Myeroff & Randolph, 1997) [for details about studies see "Models" below]. Initial holding practices were rooted in "rage reduction" therapies which used highly intrusive methods to force a "cathartic release of emotions" (Randolph, 2001). Later versions of holding therapies often abstain from highly forceful methods but still employ modified holding techniques and maintain their theoretical assumptions of cathartic release of rage and developmental arrest.

***Critics of Holding Therapy*** consider theoretical claims about the need for cathartic release and breaking through developmental arrest outdated (Hanson & Spratt, 2000; O'Connor & Zeanah, 2003). Critics also point out that such treatment itself may be traumatizing and lacks adequate empirical validation to ensure its effectiveness and being harm free (O'Connor & Zeanah, 2003; Steele, 2003; Wilson, 2002; James, 1994). While a few small studies (Myeroff, Mertlich & Gross, 1999; Myeroff & Randolph, 1997) have shown a reduction of aggressive and delinquent behaviors, they did not prove the formation of positive attachments (the stated goal of attachment therapy). The lack of long term data also leaves the question if treated children will be able to form more stable attachments in adolescence or adulthood (Wilson, 2002). Authors have likened some of the techniques to brainwashing "in which individuals are belittled, degraded, and forced into submission" (Wilson, 2002 p. 47) whereby positive effects could well be attributed to fear rather than formation of attachment.

In other words, it is possible that coercive holding practices foster trauma bonds, but not healthy attachment relations (James, 1994). Given the significant trauma history of children with RAD, therapies that use physically or psychologically coercive methods are likely to traumatize or re-traumatize already vulnerable children, and are antithetical to established trauma treatments. Trauma treatment should empower clients, not frighten them into submission (James, 1994).

In response to controversies and concerns about holding therapies the Association for the Treatment and Training in the Attachment of Children (ATTACH) was established in 1989. According to its website ([www.attach.org](http://www.attach.org)), ATTACH is an international coalition of parents, professionals and others setting out to increase awareness about attachment and its importance to human development, and to promote clinical education, training, research and standards for ethical practice. ATTACH does not reject physical touch or holding but rather delineates what members consider appropriate versus inappropriate use of physical contact [see Appendix A below for details].

## Treatment Models and Their Level of Empirical Support

### Treatments That Include Holding Therapy

The literature search revealed five different models of treatment that include holding therapy in way form or another.

1) The “**Welch Method Regulatory Bonding**” created by psychiatrist Martha Welch is among the earliest treatment models for RAD and was popularized through Welch’s book *Holding Time* (1989). Since 1977, **Welch Centers for Family Treatment** are located in New York and Connecticut and offer “Intensive Family Treatment Direct Synchronous Bonding,” a method that is also part of the Spaulding Adoption program at **Beech Brook**. The Welch Center website ([www.marthawelch.com/attachment\\_disorder.shtml](http://www.marthawelch.com/attachment_disorder.shtml), 2003) praises their methods as a breakthrough parenting strategy that revolutionizes both the way parents relate to their children and the way the child relates to the parents. The website specifies that interventions typically consist of interactive psychotherapy, including “the use of physical aids and nonverbal communication,” followed by insight oriented, cognitive behavior therapy and/or supportive psychotherapy.

Welch’s model is based on the assumption that RAD children and their mothers were denied positive mutual bonding experiences, and treatment is divided into three phases. The first phase is a two day intensive emergency stabilization that involves as many family members as possible and focuses on assessing the dynamics of family members’ attachment, severity of disturbances, and initiates bonding sessions. Direct synchronous bonding requires the mother (not the therapist) to forcefully hold the child on her lap throughout an expected time of the child’s resistance to being held. After the child’s resistance has passed a positive experience of mutual bonding is expected to follow. The second phase, lasting two to six months, requires weekly follow up visits to allow for parent training and reinforcement. The third phase offers participation in a family network who will mentor and support each other. **No empirical studies** evaluating the Welch method could be found in the search of data bases.

2) Treatment at the **Attachment Center at Evergreen (ACE)**, Colorado, provides an intensive combination of psycho-education, psychodramatic enactment, individual and family therapy, including holding practices. ACE treatment begins with a two week intensive (10 three-hour sessions on consecutive work days) involving the child, referring agency/parents, treating therapist, ACE therapist, ACE foster parent. The child lives with an assigned treatment family during the two week period. Parents spend time with foster parents to learn parenting tactics but have otherwise “minimal contact” with their child unless the child “is working hard enough in therapy to earn additional time” with parents (Myeroff & Randolph, 1997, p. 4). The four basic techniques are described as “cognitive restructuring,” “psychodrama,” “healing the inner child,” and “therapeutic holding” by therapist or foster parent. Following their two week intensive, the Attachment Center offers extended treatment (1 to 9 months) in therapeutic foster



care for some of their children. Psychiatrist Foster Cline was among the founders of attachment therapy at Evergreen. He left the ACE and moved to Idaho after being accused of gross negligence in the case of a holding therapy practiced under his supervision. The case was settled. With educator Jim Fay, Cline since founded the Love and Logic Institute that promotes child rearing strategies for parents and teachers of children with emotional and behavioral disorders (Bowers, 2004).

Only one peer-reviewed published outcome study (Myeroff, Mertlich & Gross, 1999) of ACE treatment could be located. The article describes results of a quasi-experimental study involving adoptive children with special needs (n=12), compared to a demographically similar, non-random control group (n=11). Six weeks after the above treatment, the treatment group showed statistically significant decreases in aggressive (p.<02) and delinquent behaviors (p<.006) as measured by the Child Behavior Check List (CBCL) while the control group did not. Limitations of the study include the small sample size, non-equivalent control group, and short timeframe for follow-up.

Another longer-term study by Myeroff and Randolph (1997) was published in a non-peer-reviewed monograph and involved children ages 7-12 (n = 21 for six months; n =14 for one year). Children received the two week intensive described above plus long-term treatment and therapeutic foster care for at least six months. Parents provided retrospective CBCL scores for the month prior to treatment, and foster parents at six and 12 month intervals. At six months children showed significant improvements (p<.05 or smaller) on six of eight CBCL subscales. The strongest improvements were noted for attention problems, followed by delinquent behaviors, aggressive behaviors, thought problems, anxiety/depression, and withdrawing behaviors. At 12 months the scores for anxious/depressed moods were the most improved category followed by thought problems, aggression, delinquent behavior and attention problem. The authors conclude that their results indicate consistent improvements whereby externalizing problems are the first to be affected and internalizing difficulties take a longer period to improve. However, this study lacks a control or comparison group making it impossible to discern if such improvements could have occurred through other means, including the passage of time.

3) Elizabeth Randolph (2001) is a proponent of a "Humanistic Attachment Therapy" which has evolved from the ACE model and emphasizes the idea that children with RAD equate being right (in control) with being loved/lovable. Like the ACE model, Humanistic Attachment Therapy uses holding practices only after having contracted with children and parents. As Randolph (2001) outlines, the child's consent is negotiated by having the child agree that 1) their life is not going well 2) that they are in part to blame 3) they are willing to work hard for change and 4) do so the therapist's way (meaning they agree to participate in interventions that are not previously known or explained to the child). Humanistic AT adds to the contracting a "free pass" phrase that the child can say when he/she wants therapy to end. Should the child not agree to all the points, the parents will inform him/her of the alternative living plans that are to be expected.

An effectiveness study included in Randolph's monograph presents results of a pre-post test of 25 RAD children who received two weeks of intensive humanistic AT, and twelve months of follow up therapy. Measures included the Rorschach test and the Randolph Attachment Disorder Questionnaire (RADQ). Results indicated statistically significant improvements, though there were no control or comparison groups.

4) Levy and Orlans (1998) promote "***Corrective Attachment Therapy***" developed by **Evergreen Associates**. Corrective attachment therapy consists of a combination of cognitive, emotional, and family systems therapy as well as parenting skills training, and a "Holding Nurturing Process" (HNP) during which the child is held in an infant nurturing position by the therapist and/or the parents. Presented as "not a technique but a relationship context" (p.114), the authors cite neurobiological research to claim that HNP promotes attachment behaviors by reducing trauma related alarm reactions and increases self-regulation, provides needed structure and facilitates a corrective experience.

An undated internet article by the same authors (Levy & Orlans, n.d.) presents a brief summary of pre-post test study of fifty children who participated in two weeks of Corrective Attachment Therapy. Measures included behaviors, emotions, cognition, relationships, physical symptoms, morality/ spirituality as reported by parents. Of the children, 84% were adopted, 46% were of a different ethnicity/race than their adoptive parents, 45% were adopted as part of a sibling unit, and 72% had one or more foster placement prior to adoption (averaging three prior placements). Ninety percent had experienced severe abuse prior to placement lasting an average of 48 months, 46% were forcefully removed against the wishes of their biological parents, and 34% had spent significant time in foreign orphanages. Ninety-two percent had an RAD diagnosis, 76% had multiples diagnoses. Parents reported more severe symptoms due to different cultural/ethnic backgrounds, the length of time spent in abusive situations, the number of years the child spent with biological parents, prior diagnosis of PTSD or other severe diagnosis other than RAD. Parents with secure attachment histories reported lowest the intensity of symptoms. For up to three years post treatment, the authors found significant improvements after treatment for all six measured categories. Stronger improvements were noted for children who had fewer prior moves in the foster care system, fewer pre-therapy diagnoses, were not adopted as a sibling unit, were not taking psychotropic drugs during treatment, and had an adoptive mother with a secure attachment history. The study lacked a control or comparison group, and many details necessary to judge the quality of the research and its instruments were not provided.

5) ***Dyadic Developmental Psychotherapy*** provides attachment therapy focused on increasing the reciprocity between caregiver and child. Dyadic Developmental Psychotherapy is promoted by the **Center for Family Development** in Williamsburg, New York and by *Daniel Hughes* of Maine. The website of the Center for Family Development (<http://www.center4familydevelop.com/developmentalpsych.htm>) presents this model somewhat differently than Dan Hughes does on his website (<http://www.danielahughes.homestead.com/Model.html>).

Claiming to be the only evidence-based treatment for attachment disorder, the Center for Family Development cites the Evergreen studies mentioned above as proof for the effectiveness of its own model (Becker-Weidmann, 2004). This self-representation leads the reader to assume that Dyadic Developmental Psychotherapy is, if not identical, than at least very similar to the kind of holding/attachment therapy practiced at ACE. Becker-Weidmann (2004) outlines five principles of treatment that are based on the assumption that the core and cause of RAD is trauma caused by significant and substantial experiences of neglect, abuse, or prolonged and unresolved pain in the first two years to three years of life: (1) therapy must be experiential because the disturbance is pre-verbal and RAD kids do not respond to other traditional forms of therapy; (2) therapy must be family-focused and focus on parents' capacity to create a safe and nurturing, being able to offer playfulness, love, acceptance, curiosity, and empathy (PLACE); (3) the trauma must be directly addressed so that the child can re-experience the painful and shameful emotions that surround the trauma so as to revise the child's personal narrative and world-view; (4) a comprehensive milieu of safety and security must be created at home and in therapy, good communication and coordination among home, school, and therapy is important; and (5) therapy is consensual and not coercive. The author emphasizes that provocative, coercive techniques or "compression wraps" have no place in treatment. At the same time, holding may be part of treatment in a cradling way but not in a restrictive, invasive, or constricting fashion.

Given how little certainty there is about the etiology or "core" of RAD and treatment outcomes, Becker-Weidmann's description of Dyadic Developmental Psychotherapy as practiced at the Center for Family Development is at best overly enthusiastic and self-assured in its claims about causes and treatment. Of the five principles, the necessity to "revisit" the traumatic event may be difficult to achieve when children's histories are not known, or when they were very young at the time of traumatization. Caution should be exercised with a mandate to "directly address the trauma" because there is significant research to show that pushing clients to explore trauma can effectually re-traumatize the victim (James, 1994).

Daniel A. Hughes' (2002) description of Dyadic Developmental Psychotherapy more clearly incorporates such concerns and integrates established principles of trauma treatment into his approach. Though his model may also include nurturing-holding, he moves further away from creating coercive situations or an emphasis on child obedience. In his view, directing children to address their past traumas must be done slowly to avoid both dysregulation (a state of affective distress causing out of control behaviors) on the one hand and defensive avoidance on the other. Avoiding dysregulation is described as a primary treatment goal. According to Hughes, providing more structure, reassurance, and options makes it more likely that the child will actively engage in treatment without affective dysregulation and has reduced the amount of holding children to ensure their safety. Hughes general principles for treatment and parenting are:

1. Eye contact, voice tone, touch (including nurturing-holding), movement, and gestures are actively employed to communicate safety, acceptance, curiosity,

playfulness, and empathy, and never threat or coercion. These interactions are reciprocal, not coerced.

2. Opportunities for enjoyment and laughter, play and fun, are provided unconditionally throughout every day with the child.
3. Decisions are made for the purpose of providing success, not failure.
4. Successes become the basis for the development of age-appropriate skills.
5. The child's symptoms or problems are accepted and contained. The child is shown how these simply reflect his history and how they need not be experienced as shameful.
6. The child's resistance to parenting and treatment interventions is also accepted and contained and is not made to be shameful by the adults.
7. Skills are developed in a patient manner, accepting and celebrating "baby-steps" as well as developmental plateaus.
8. The adult's emotional self-regulation abilities must serve as a model for the child.
9. The child needs to be able to make sense of his/her history and current functioning. The understood reasons are not excuses, but rather they are realities necessary to understand the developing self and current struggles.
10. The adults must constantly strive to have empathy for the child and to never forget that, given his/her history, s/he is doing the best s/he can.
11. The child's avoidance and controlling behaviors are survival skills developed under conditions of overwhelming trauma. They will decrease as a sense of safety increases, and while they may need to be addressed, this is not done with anger, withdrawal of love, or shame.
12. The child may be held at home or in therapy for the purpose of containment when the child is in a dysregulated, out-of-control state only when less active means of containment are not successful in helping him/her regain control, and only as long as the child remains in that state. The therapist/parent's primary goal is to insure that the child is safe and feels safe. The goal is never to provoke a negative emotional response or to scold or discipline the child. The model for this type of holding is that of a parent who holds an overtired, overstimulated, or frightened preschool child and helps him/her to regulate his distress through calm, comforting assurances and through the parent's own accepting and confident manner. (Hughes, 2002)

Hughes' list of "don'ts" include

1. Holding a child and confronting him/her with anger.
2. Holding a child to provoke a negative emotional response.
3. Holding a child until s/he complies with a demand.
4. Poking a child on any part of his/her body to get a response.
5. Pressing against "pressure points" to get a response.
6. Covering a child's mouth/nose with one's hand to get a response.
7. Making a child repeatedly kick with his/her legs until s/he responds.
8. Wrapping a child in a blanket and lying on top of him/her.
9. Any actions based on power/submission, done repeatedly, until the child complies.

10. Any actions that utilize shame and fear to elicit compliance.
11. "Firing" a child from treatment because s/he is not compliant.
12. Punishing a child at home for being "fired" from treatment.
13. Sarcasm, such as saying "sad for you", when the adult actually feels no empathy.
14. Laughing at a child over the consequences which are being given for his behavior.
15. Labeling the child as a "boarder" rather than as one's child.
16. "German shepherd training", which bases the relationship on total obedience.
17. Blaming the child for one's own rage at the child.
18. Interpreting the child's behaviors as meaning that "s/he does not want to be part of the family", which then elicits consequences such as:
  - A. Being sent away to live until s/he complies.
  - B. Being put in a tent in the yard until s/he complies.
  - C. Having to live in his/her bedroom until s/he complies.
  - D. Having to eat in the basement/on the floor until s/he complies.
  - E. Having "peanut butter" meals until s/he complies.
  - F. Having to sit motionless until s/he complies.

Giving the above consequences in a "loving, friendly tone" does not make them appropriate. That tone may actually cause greater confusion about the meaning of love, parenting, and safety which we want children to understand. (Hughes, 2002)

**In summary**, although Evergreen associated authors point out that invasive or coercive holding practices are not used by therapists at ACE and others following the ethics guidelines of ATTACH (see Appendix A. for details), softened versions of the same techniques of holding or wrapping are still employed either with a neurobiological rationale, or with the intent of releasing emotions after having "negotiated consent." The negotiation or contracting process described by Randolph (2001) to receive this consent requires children to agree that they will trust a therapist before they get to know him/her while threatening that they will otherwise have to leave their parents. Although it may be necessary for families to think of other living arrangements, and let children know about it, the strategic inclusion of this possibility in the negotiation can hardly result in children's true consent.

Overall, while testimonies and small studies indicating improvements should not be ignored, they should not be presented as scientific proof of the efficacy and validity of a practice like holding therapy. The preliminary evidence of the Evergreen studies provides little validation for the use of such a controversial intervention (Wilson, 2002, p.48). At the same time, controlled studies of holding therapies are unlikely to be funded since research proposals involving such intense physical contact with children do not pass Institutional Review Boards, and because dangerous practices of some individuals have raised barriers (Dozier, 2003; Minnis & Keck, 2003). Therefore, authors recommend borrowing less invasive approaches that have been validated for children who have been abused or neglected (Hanson & Spratt, 2000; James, 1994) and emphasize thorough

assessment, establishing measurable goals, ensuring safety and maximize trust, stabilizing crises, setting boundaries, working directly with the caretaker, focusing on child and family coping rather than inferred pathologies, and maintaining the child in least restrictive and least intrusive level of care.

## **Trauma Treatment Approaches**

In her *Handbook for Treatment of Attachment-Trauma Problems in Children*, James (1994) offers insights into the complexity and richness of the field with contributions from professionals, families, and children. James presents a variety of possible causes for attachment trauma including the loss of caregivers due to prolonged illness, death or war. She lists five conditions as treatment essentials: (1) safety from threatened or actual harm; (2) a protecting environment allowing the exploration of psychologically frightening experiences; (3) therapeutic parenting; (4) clinical skills in the areas of child therapy, attachment, development and trauma; and (5) a therapeutic relationship that allows the gradual growth of trust and is not seduced by ideas of "sudden breakthroughs." Adopting a breakthrough ideology runs the risk that the search for the perfect, clever intervention becomes the center of clinical activity at the expense of valuing unique relationship with the individual child (James, 1994). Therefore, James promotes treatment approaches that rely on more established (but not evidence-based? James herself does not provide any information as to evidentiary status of the treatments. I suppose some of them have been researched to some degree) courses of trauma treatment including dramatic and developmental play therapy, or drama therapy, emphasizing the integration of knowledge about attachment, trauma and development, as well as the diversity and strengths of families and children.

Burkhardt-Mramor (1996) of the Beech Brook Center, Ohio, also presents a case study describing the treatment of an 11-year-old boy through music therapy. The author suggests that music therapy may be a less threatening model of therapy for children with attachment disorder because it creates opportunities for relationship-building and reciprocity by capitalizing on children's curiosity and interest in musical activity.

***Eye Movement Desensitization and Reprocessing (EMDR)*** is a treatment modality developed in the late 1980s for trauma victims, specifically those who exhibited symptoms of post traumatic stress (PTSD) and involves bilateral stimulation of the patient's brain to enhance the desensitization toward traumatic memories and the replacement of negative cognitions with positive ones (Rubin et al., 2001). Studies evaluating the effectiveness of EMDR with adult patients have produced mixed results. Supportive outcomes were noted for the treatment of relatively circumscribed traumatic events. (Rubin et al., 2001). Although proponents of EMDR recommend the method for children (Tinker & Wilson, 1999; Greenwald, 1998) there are still very few rigorous studies of EMDR with children or adolescents which, taken together, produced mixed findings (Rubin et al., 2001). Taylor (2002), for instance, presents a case study of an eight year old adopted girl who was treated with two sessions of Eye Movement Desensitization and Reprocessing (EMDR), accompanied and followed by supportive

family therapy. The usual EMDR protocol was modified to focus on feelings of happiness and security (rather than on traumatic events which remained unknown) and to engage a child rather than an adult. Parents received supportive and educational therapy. After the first session the mother and teachers reported positive changes in the girl's behaviors. The girl's behaviors toward the father changed from ignoring and being non-responsive to being more challenging and oppositional. A positive reframe of the change allowed the father to be more tolerant of the new engagement style. Twelve months post the EMDR treatment (family therapy had continued after EMDR) mother, child, and school reported the maintenance of positive development. While this report presents an interesting and apparently successful use of EMDR as one element of RAD treatment, the treatment package approach makes it difficult to determine if EMDR was the effective treatment element in this case. The use of EMDR with RAD children should be viewed cautiously without empirically sound replication of this success.

A study by Rubin et al.(2001) raises doubts about proponents' claims to rapid or dramatic effects of EMDR on children who, like RAD children, did not suffer from a circumscribed traumatic event but from lasting, more complex traumatic experiences at an early, pre-verbal age. Rubin et al. (2001) conducted a small study into the effectiveness of EMDR as an added component to routine child treatment at a Child Guidance Center. The experimental study involved 39 children between the ages of six and fifteen who were diagnosed with a range of emotional and behavioral disorders. The treatment of children required multiple improvisational deviations from EMDR protocols because children resisted the therapist instructions such as following hand movements, or discussing negative memories or thoughts. Results indicated that compared to the routine treatment control group the experimental group did not show statistically significant differences on internalizing or externalizing scores of the CBCL. The author concludes that further research is needed to support possible effectiveness of EMDR for children with complex emotional or behavioral difficulties.

## **Residential Treatment**

Because of the severity of their symptoms, some RAD children are also treated in residential facilities or inpatient psychiatric hospital units. Some treatment centers, like Cedar Springs Behavioral Health Systems, in Boulder, Colorado, advertise specialized residential programs for children with RAD ([www.reactiveattachment.com](http://www.reactiveattachment.com)).

Ziegler (1994) describes the small residential program of Jasper Mountain, Oregon, where children are placed in a family context with parents who are professionals. Founded in 1982, Jasper Mountain offers an intensive, long-term treatment program for children who have experienced severe abuse and neglect. Specializing in trauma, attachment, sexuality and life-skills development, Jasper Mountain's program combines environmental intervention (including diet, architecture, no commercial TV etc.), behavior management, psychotherapy (family and individual treatments including play and art therapy), and interventions aimed to increase self-esteem (including biofeedback, creative arts, video feedback etc.). The program does not promise success and does not

consider children “cured” when they leave. Ziegler rejects notions of “holding” as a quick way to establish bonding after a short period of time and insists learning reciprocity takes years. No empirical studies about the programs’ effectiveness could be located.

The Amherst Wilder Foundation has plans to create a small residential facility for children with severe RAD ([www.wilder.org/programs/HealthYouth/RAD.html](http://www.wilder.org/programs/HealthYouth/RAD.html)). According to their website the residential facility will use a multi-sensory therapy approach and house four to six children ages 5 to 12 for a year or more, based on the child's need and progress. The facility is conceptualized with a live-in "house parent" model of staffing, supported by child care staff and overseen by a therapist. No further information on the status of the project could be obtained. Other planned activities of the foundation include developing and providing training for staff, foster parents, caregivers and professionals who work with children with RAD, establishing a prevention program for teenage mothers with RAD who are at risk of not bonding with their babies, and furthering public policy and research efforts on local and national levels.

This review of the literature produced no studies on the effectiveness of residential or inpatient treatments for RAD children, so there is no empirical evidence to suggest that these are any more effective than outpatient treatments. Also, given the overlap of RAD symptoms with those of children with conduct disorder, and the link between disturbed attachment and disturbances in social development (Allen, Hauser & Borman-Spurrell, 1996; Cooper, Shaver, & Collins, 1998), there is currently little reason to conceptually favor residential treatment for RAD children. Residential care and inpatient treatment have not been shown to be effective approaches for children diagnosed with conduct disorder and other related conditions. (See Best Practice Reports #1 and #3). As with other conditions and diagnoses, it is recommended that inpatient or residential treatment be pursued only after all community-based options have been shown ineffective, and/or in the event of danger of harm to self or others.



## Summary

Undeniably, attachment is a promising concept and its ongoing and future exploration will continue to further the understanding and treatment of a variety of psychiatric difficulties. However, there is to date significant controversy among professionals about the etiology and definition of attachment difficulties, as well as questions about the validity of criteria currently summarized under the diagnosis of Reactive Attachment Disorder. In addition, there is scant empirical evidence to support controversial forms of treatment, including holding therapy. Based on the extensive literature review provided above, the following are recommended as current best practices in this arena.

**Assessment** best relies on multiple sources, such as parent reports, school reports and observations, to determine if, and what kind of, attachment problems are present. Assessments should include history of treatment, psychological and social development, education, trauma and medical history, intellectual and cognitive skills, family functioning as well as breaks and disruptions in the continuity of caregivers. Since attachment is an interactive concept, assessments should include repeated observations of interactions with caregivers as well as appraisals of caregivers' attachment styles. Observing single episodes of interaction is not sufficient. Some assessment tools have been developed to aid in assessment, with the Randolph Attachment Disorder Questionnaire (RADQ) (Randolph, 2001) appearing to be the best researched to date.

Regarding **treatment**, no particular treatment method has shown to be effective with RAD children (O'Connor & Zeanah, 2003). Although there have been a few, mostly non-published studies of the positive effects of treatments that include holding therapy, these lacked sufficient samples, comparison groups, and follow-up. Thus, despite the claims of some proponents, firm conclusions about effectiveness cannot and should not be made. This applies to both outpatient and residential treatment.

In light of significant concerns about effectiveness and ethics of holding therapies, best clinical practices for children diagnosed with RAD are guided by principles of trauma treatment and abstain from holding the child for purposes other than immediate safety. Although the national ATTACH organization supports non-coercive holding, it remains a matter of interpretation where "therapeutic" or "nurturing" holding ends and coercive practices begin. Because of the risk of causing harm through traumatization or re-traumatization, holding therapies should be avoided in favor less intrusive methods.

Attachment based interventions should aim to improve the caregiver's capacity to serve as a secure base, and to increase reciprocity or attunement of child and caregiver. It stands to reason that such interventions can be offered without routinely engaging in holding practices when therapists are appropriately trained and can modify established methods of child therapy to meet the specific needs of a client. Treatment should ensure the child's physical and emotional safety, avoid dysregulation, and support, involve,

educate and train caregivers so that reciprocity/ attunement between caregiver and child can be increased. Because of the interactive nature of attachment, therapists should not only be educated and trained in the areas of child development, trauma, attachment, and family therapy but also be attuned to their own strengths and weaknesses regarding interpersonal attachments.

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## **Appendix A.**

### **ATTACH**

The organization outlines basic practice procedures of assessment and treatment, including holding, on its website (<http://www.attach.org>) as follows:

Clinical practice procedures for ATTACH members may include but are not limited to the following:

1. Thorough assessment, including the following as indicated:
  - a. History of treatment
  - b. Psychological history
  - c. Educational history
  - d. Medical history
  - e. Attachment and social history including breaks/disruptions in attachment.
  - f. Developmental history (including prenatal and birth)
  - g. Family functioning
  - h. Intellectual and cognitive skills and deficits
2. Diagnosis or description of problem includes:
  - a. Differential diagnosis (this may include any or several DSM or ICD diagnoses)
  - b. Attachment symptomatology
  - c. Breaks in attachment history
3. Treatment planning
  - a. Is guided by assessment and diagnosis
  - b. Defines therapeutic modalities
  - c. Clarifies for relevant parties (i.e., parents, referral sources, therapeutic/foster parents, follow-up therapists, and child when appropriate) the rationale for the intervention; the respective roles and responsibilities of each person involved.
  - d. Utilizes a treatment team of other significant persons in the child's life when indicated
  - e. Includes informed consent from client and parents prior to treatment as an essential element of treatment planning. Therapeutic contracting should also occur during treatment
  - f. Builds on the strengths of the child and family
  - g. Includes measurable goals
  - h. Is reviewed and updated regularly

4. Treatment process
  - a. Attachment therapy emphasizes relationships among all participants, including:
    - i. Trust
    - ii. Empathy
    - iii. Reciprocal behaviors
    - iv. Attunement
    - v. Communication
    - vi. Touch
    - vii. Physical and emotional closeness
    - viii. Humor and playfulness
  - b. Parents and children are active members of the treatment team working to develop healthier patterns of interacting and communicating.
  - c. The family's emotional response to the therapy needs to be monitored, as well as the child's. Parents may have problems which must be understood and addressed if they are to help their child resolve attachment problems.
  - d. When there are differences between the parent(s) and practitioner, the practitioner and parent(s) will actively work to resolve them
  - e. The practitioner needs to take an active and directive stance in working with the child and family on core issues that the child and family may find difficult to address. Because the child's defenses against healthy relationships are so strong, therapeutic interventions may be confrontational and challenging and may involve holding, touch, or physical proximity, while never losing sight of everyone's need to feel and be safe.
  - f. Holding as a therapeutic technique provides a multi-sensory experience that refines attunement, facilitates emotional reciprocity and honesty, enhances empathy responses, allows the child to experience emotional openness in a safe way, and reenacts the holding nurturing experience of infancy; all of which provide a corrective cognitive-emotional experience.
  - g. The practitioner with the parents is in charge of the session and of the child, in a nurturing, safe, and empathic manner. The adults take the lead in attachment therapy and are always observing and responding to the feelings and needs of all family members.
  - h. When exploring unresolved issues, treatment will take into account past and present family dynamics. Issues regarding birth parents will be addressed in a respectful and honest manner. Treatment will differentiate the new parent relationships from the old ones.
  - i. Interventions should be flexible and specific to the needs and emotional state of each member of the family; and both the family's and child's response to therapy will be monitored
  - j. A central therapeutic activity is for the child and family members to experience and then express their emotional responses to past and present situations that are interfering with attachment
  - k. Each child and family is unique, and a variety of therapeutic techniques may be utilized based on the child's history and inner working model; and on parent's abilities and style
  - l. The practitioner may model and elicit various cognitive-emotional states in order to facilitate the child's integration of cognition to emotion



- m. There is no known medication for attachment disorder. Children may sometimes need medication for coexisting conditions; however inappropriate or over-medication may thwart the therapeutic process.
- n. Parent-child interactions that are central to establishing a healthy attachment, (i.e. eye contact, physical contact, tone of voice, smiles, other non-verbal communication and gestures) are central to the interactions of therapy. These interactions may be exaggerated with the child to produce a therapeutic effect
- o. In those cases when family members decide that they are unable/unwilling to work toward forming a secure attachment, a practitioner will, after careful work and evaluation, respect a family's choice and offer an alternative treatment plan.

5. Parenting Process: The practitioner assists the parents in developing parenting strategies and philosophies which support the development of healthy attachments. The practitioner serves as a consultant to the parents on issues and interventions, including but not limited to the following:

- a. supporting the parents' authority and need to maintain control over the family environment, while assisting the child to feel safe enough to relinquish his/her compulsive need to be in control.
- b. increasing the child's readiness to rely on the parent for safety, help, comforting, nurturing
- c. encouraging a positive, supportive, family atmosphere
- d. encouraging a high level of nurturance
- e. encouraging structure and limits
- f. increasing reciprocal, positive interactions between parent and child.
- g. helping the child make choices that are in his own best interest, and in the best interest of his family, and to accept the consequences of those choices
- h. helping parents become emotionally available for their child as healthy and safe individuals. This may include examining their own issues, such as the marital relationship, infertility, grief and loss, childhood trauma, etc.
- i. helping families and children develop reasonable expectations of success

6. Discharge planning

- a. Will begin at intake
- b. Goals and progress will be reviewed regularly and at the completion of therapy.
- c. Follow-up therapy will be recommended when appropriate.

(February 1, 2004, <http://www.attach.org/>)

ATTACH further outlines its safety principles to provide clinicians or parents guidelines for the multitude of individualized situations that might arise.

- 1. All participants involved in an intervention will ensure that the physical and emotional health and welfare of everyone involved in an intervention are monitored at all times.

2. Each person will be responsible for seeing that effective steps are taken to adjust or terminate an intervention process when there is *any* indication that someone's psychological or physical safety may be being compromised.
3. The child will never be restrained or have pressure put on them in such a manner that would interfere with their basic life functions such as breathing, circulation, temperature, etc.
4. Parents and/or other appropriate individuals should observe, participate in, and/or monitor the therapy process being utilized.
5. Touch will always be appropriate and used for therapeutic purposes. Sexual touch is never appropriate.
6. Therapeutic interventions will be carefully selected to protect the child from physical pain.
7. No form of shaming, demeaning, or degrading interaction is acceptable as a therapeutic intervention.
8. Treatment options, such as holding, paradoxical interventions, and "sitting," should never be used as punishment for perceived misbehavior.

It is never possible to anticipate all situations where the issue of the well-being of participants might be, or might become, an issue. Therefore everyone involved in the intervention process with a child and family is expected to use good clinical judgment coupled with good common sense. The following questions can be used throughout treatment to assist practitioners and parents in their decision-making process:

1. What am I trying to accomplish with this particular child and/or family?
2. Will this intervention contribute to what I am trying to accomplish?
3. Is there a less intrusive or less restrictive intervention that will accomplish the same purpose?
4. What, if any, safety issues should I consider when selecting an intervention for a child and their family?
5. What are the treatment implications when deciding not to use a specific intervention with a particular child and family?
6. How do I provide effective treatment interventions while at the same time maximizing the well-being and safety for everyone involved in the intervention process?

7. Is everyone involved in the intervention informed and appropriately prepared to carry out his or her part of the process?
8. Is the intervention being considered consistent with the Standards of Practice, Basic Assumptions, and Safety Principles of ATTACH?
9. Is the intervention being considered within the standards of practice, and ethical standards of the professional organization and licensing or certification body of each individual involved?

(February 1, 2004, <http://www.attach.org/>)

**Appendix B. Literature Matrix**  
**Attachment Disorders (AD)/Reactive Attachment Disorder (RAD)**  
*in alphabetical order by author*

#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
1	Becker-Weidman (2004)	Website of the Center for Family Development	Outlines treatment principles of Dyadic Developmental Therapy	<p>Five principles based on underlying assumption that the core and cause of RAD is "trauma caused by significant and substantial experiences of neglect, abuse, or prolonged and unresolved pain in the first two years to three years of life".</p> <ol style="list-style-type: none"> <li>1) therapy must be experiential because the disturbance is pre-verbal and RAD kids do not respond to other traditional forms of therapy</li> <li>2) Therapy must be family-focused and focus on parents' capacity to create a safe and nurturing, being able to offer playfulness, love, acceptance, curiosity, and empathy (PLACE).</li> <li>3) The trauma must be directly addressed so that the child can re-experience the painful and shameful emotions that surround the trauma so as to revise the child's personal narrative and world-view.</li> <li>4) A comprehensive milieu of safety and security must be created at home and in therapy. Good communication and coordination among home, school, and therapy is important.</li> <li>5) Therapy is consensual and not coercive. The author emphasizes that provocative, coercive techniques or "compression wraps" have no place in treatment. At the same time, holding may be part of treatment in a cradling way but not in a restrictive, invasive, or constricting fashion.</li> </ol>	<p>Given how little knowledge there is about the etiology or "core" of RAD, DDT presents itself overly enthusiastic and certain in its claims about causes and treatment.</p> <p>Of the five principles, the necessity to "revisit" the traumatic event may be difficult to achieve when children's histories are not known, and/or they were very young at the time of traumatization. Caution should be exercised with the mandate to "directly address the trauma" because there is significant research to show that pushing to explore trauma can effectually re-traumatize the victim.</p> <p>The author claims that DDT is the only evidence-based treatment for RAD citing studies conducted at Evergreen which leads to the conclusion that DDT is the same as or at least very similar to the attachment therapy practiced at Evergreen.</p>

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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
2	Burkhardt-Mramor (1996)  [Beech Brook, Ohio]	Case study describing the treatment of an 11 year old boy	<ul style="list-style-type: none"> <li>• Client's history and background description</li> <li>• Symptomatology and Music therapy assessment</li> <li>• Phases of the intervention</li> <li>• Conclusion and implications</li> </ul>	<p>The author suggests music therapy as less threatening model of therapy for children with attachment disorder because it creates opportunities for relationship-building by capitalizing on children's curiosity and interest in musical activity. The case study presents an 11 year old Caucasian boy "John" with a family history of emotional, physical, and domestic abuse, neglect, multiple caregivers and placements. His symptomatic behaviors included self-abusive, suicidal acts and aggression toward others by fire setting, drowning a puppy, trying to suffocate a cousin. At the time music therapy began, John had been in treatment for eight months including residential care, day treatment and individual therapy. With a below average IQ and particular difficulties in verbal processing talk therapy seemed ineffective. Although he himself had requested music therapy his behaviors were distancing, and he often refused to participate. Nonetheless, he asked for extended individual music therapy time which was granted. In this initial 3 months long phase John seemed to derive little pleasure from MT but increasingly played out childhood experiences with puppets and games after each session. For phase II the therapist changed her approach for three months to a high energy style in which simple sure-success activities were presented quickly and with enthusiasm, compromises on choices of instruments and rewards of free play time and coupons. Beginning reciprocity was achieved by playing musical "questions" and "answers" between therapist and John, using his preferred musical style, and storytelling with music sound effects. In the third phase (lasting about six months) John's tasks became more complex as his skills and trust grew. He was more tolerant of improvisation and reciprocal interactions both socially and musically, seeking more physical closeness and inviting the therapist to play along with him. More insight-oriented work began allowing John to express feelings musically and through writing of lyrics. Phase IV was dominated by fluctuating plans about John's future placement and notable regression until he was told we would not return to his legal father but go into foster care. The final phase revolved around John's transition to foster care.</p>	

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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
3	Chapman (2002)	Case study written by adoptive mother of RAD child	Subject: teenage girl adopted at 20 months of age Treatment: therapeutic parenting involving re-nurturing strategies at home and at school	After years of trying behavior management strategies which only served to exacerbate the difficulties, this mother (also a teacher) discovered the idea of attachment and began to think of her teenage daughter as a "thinking toddler" (Archer, 2001). Her re-nurturing strategies included sensory comforts (mom's scent on her clothes and belongings, photographs, ability and permission to call mother at any point) as well as the offer to feed her via a baby's bottle. To the mother's surprise the 13 year old daughter responded enthusiastically to the offer. The one time feeding was followed by evening rituals that involved a mixture of baby behavior with adult stories. Opportunities to "progress backwards" (thus filling the gaps and propelling development forward) were supported by the school which allowed her to escape teenage life and ridicule during breaks by retreating into a special room.	Beautifully written account of a mother's experience and her thoughts about allowing the use of re-nurturing strategies instead of behavioral management in schools.
4	Hall & Geher (2003)	Empirical study of behaviors and personality characteristics of RAD children	Subjects: N=42 (21 RAD, 21 non-RAD) Measures: RADS scale (designed by author), CBCL, Junior Self-monitoring scale, Index of empathy	Children diagnosed with RAD displayed significantly more violent and detrimental behaviors, less empathy, and more self-monitoring behaviors, perhaps in a conscious attempt to present themselves more favorably to adults.	

#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
5	Hughes (2003)  [Dyadic Developmental Therapy]	Commentary on O'Connor and Zeanah	Seven suggested principles of treatment and parenting based on clinical experience to address risk factors for attachment disorders and other psychopathologies secondary to attachment disturbances.	<ol style="list-style-type: none"> <li>2. Therapist and caregiver must themselves be autonomous (secure) in their attachment strategies because they are to co-regulate the child's affect and co-construct the meaning of the child's experiences. With a sufficiently secure caregiver, the therapist facilitates parent-child interactions, secures parents' comfort and support in the process. If the parents themselves seem not sufficiently resolved about their own attachment history, an initial separate period of individual treatment for parent and child is recommended.</li> <li>3. Caregivers and therapist must assume an active, intersubjective approach (attunement) in which the child's experience is made clear. The parent's understanding of the child's inner life becomes a way for the child to understand and eventually regulate the experiences.</li> <li>4. Caregiver and therapist need to make their own experiences of the child very obvious (even in exaggerate non-verbal ways like one communicates with infants or toddlers) because abused and traumatized children often mis-read non-verbal cues or misinterpret signs.</li> <li>5. Therapist and caregiver maintain interpersonal emotional tone of acceptance, empathy, curiosity, playfulness, sensitivity, responsiveness and availability, matching the communication of child and adult.</li> <li>6. Conflicts and misattunements are directly addressed with efforts to repair the immediate experience (counteracting the frequent shame and fear felt by children with traumatic histories)</li> <li>7. When children experience stress or other dysregulations of affect they are brought closer to the caregiver (unless the caregiver is dysregulated) who will provide the regulation and modeling. It is central for parents to be able to maintain a vision of the child's inner strength and potential to become more adaptive.</li> <li>8. Caregiver and therapist employ cognitive and behavioral treatment strategies. These strategies follow (not precede) states of attunement, interpersonal motivation, meaning-making.</li> </ol>	

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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
6	Levy & Orlans (not dated)  [Evergreen]	Brief summary of pre-/posttest study (no control or comparison groups)	<p>Subjects: 50 (n) children Treatment: two weeks of Corrective Attachment Therapy (Evergreen) consisting of a combination of cognitive, emotional, family systems and parenting skills training</p> <p>Measures include Behaviors, emotions, cognition, relationships, physical symptoms, morality/ spirituality.</p>	<p>Of the children 84% were adopted, 46% were of a difference ethnicity/race than their adoptive parents, 45% were adopted as part of a sibling unit, and 72% had one or more foster placement prior to adoption (averaging three prior placements). 90% had experience severe abuse prior to placement lasting an average of 48 months, 46% were forcefully removed against the wishes of their biological parents, and 34% had spent significant time in foreign orphanages. 92% had an RAD diagnosis, 76% had multiples diagnoses.</p> <p>Parents reported more severe symptoms due to Different cultural/ethnic background of parent and child Length of time spent in abusive situations Number of years the child spent with biological parents Prior diagnosis of PTSD or other severe diagnosis other than RAD. Parents with secure attachment histories reported lowest intensity of symptoms.</p> <p>The authors found significant improvements after treatment for all six measured categories up to three years post treatment.</p> <p>Stronger improvement were found for children who had fewer prior moves in the foster care system fewer pre-therapy diagnoses were not adopted as a sibling unit were not taking psychotropic drugs during treatment had an adoptive mother with a secure attachment history.</p>	<p>This is not a formal research article but a one-page summary of findings. Therefore, many details necessary to judge the quality of the research and its instruments are not provided. Given these shortcomings the authors' claims should be considered with caution.</p>



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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
7	Minnis & Keck (2003)  [Keck runs the Attachment and Bonding Center, ABC, in Ohio]	Commentary on O'Connor and Zeanah;  Dialogue about clinical and research issues of RAD, especially the "inhibited" subtype	Topics include <ul style="list-style-type: none"> <li>• Relation of conduct disorder to RAD</li> <li>• Assessment</li> <li>• Intervention controversies</li> </ul>	Is Conduct disorder an extension of attachment difficulties? To what extent are conduct disorder symptoms core or associated features of RAD? Do conduct disorder behaviors develop from RAD symptoms later in life? These distinctions are interesting and important research questions but are no necessarily of high priority for clinicians. Assessment at ABC include: biographies of themselves and the child written by the parents, clinical assessment of the family and the child individually (including observation of the child with family and strangers), school reports. Two week intensives are a "quick beginning, not a quick fix" and are followed by regular appointments and follow-up for about one year. Not the child but the family as a whole is the target of treatment. With younger children, only parents hold the child. With adolescents (whose participation is always voluntary) therapists may begin the holding because of the frequent antagonism of teens toward parents. Holding is not supposed to be forceful. Attempts to do research on attachment therapies that include touch have thus far failed to receive approval by ethics committees in part because dangerous practices of individuals on the fringes of the field have raised barriers and concerns. Still, developmental and neurophysiological research supports the importance of physical contact.	This response takes issue with some of O'Connor and Zeanah's claims against holding therapies .
8	Minnis, Rabe-Hesketh & Wolkind (2002)	Development and controlled testing of a 17 -item questionnaire for RAD children	Pilot work Main study Subjects: 121 families (182 foster children) in central Scotland, ages 5-16, 59% male, 99% white, average 2.5 years with current foster parent. Measures: Strengths and Difficulties Scale history of abuse/neglect: 93% Findings: four factors three clusters	Studying the results of a newly developed 17 item questionnaire, the authors found the instrument had good internal consistency (Cronbach's alpha .70) and relatively good inter-rater and test/re-test reliability. Four main factors were found which accounted for a total of 94% of the variance. Cluster analysis found that factors grouped into three clusters, one corresponding to the disinhibited type of AD, one corresponding to inhibited type, and one in which children did not seem to suffer from RAD. Analyses if associations of the questionnaire with previous neglect/abuse showed a significant association of RAD with sexual abuse (p.=0.01). The questionnaire also showed high associations for measures of psychopathology including hyperactivity, conduct disorder, emotional problems, etc.	

				<p>The authors conclude the study validated the categorization of inhibited and disinhibited subtypes although factors showed a significant overlap of items which can be applied to both subtypes. One factor contains items which may simply describe an immature, anxious but other normal child. Behavioral descriptors do not always capture the distinction of normal to disordered behaviors. "It may be that children with attachment disorders display appropriate social behaviour but at developmentally inappropriate times." Insofar as caregivers are part of the Attachment dynamic, using caregiver reports to diagnose is "potentially problematic". The association of sexual abuse and RAD is notable but does not reveal any directionality, i.e. is sexual abuse part of the pathogenic care thought to cause RAD or are disinhibited RAD children more vulnerable to sexual abuse? It remains difficult to identify core symptoms of RAD that clearly distinguish this diagnosis from others. Future research will need to establish the developmental course of RAD and answer the question where insecure attachment styles end and attachment disorders begin.</p>	
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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
9	Myeroff & Randolph (1997)  [Evergreen]	Preliminary results of two in-house studies of Attachment Therapy Center at Evergreen (ACE) (Monograph)	Description of attachment therapy treatment model for children (ages 4-14)  Two outcome studies: 1) Myeroff: two week intensive treatment of special needs adoptive children (n=12), quasi-experimental, non-random control group (n=11) <i>Measures:</i> CBCL one week prior to tx, and one week post tx (or at beginning and end of four week interval for control group)  2) ACE long-term study with children ages 7-12, (n= 21 for six months, n=14 for one year): two week intensive plus long-term treatment and therapeutic foster care for at least six months. No control/comparison group. <i>Measures:</i> CBCL (by parents) at one month prior to tx, and at six and 12 month interval (by foster parents)	Attachment therapy Model: Two week intensive (10 three-hour sessions on consecutive work days) with child, referring agency/parents, treating therapist, ACE therapist, ACE foster parent. Child lives with assigned treatment family during two week period, parents "spent time" with foster parents to learn "parenting tactics" but have otherwise "minimal contact" with their child unless the child "is working hard enough in therapy to earn additional time" with parents (p.4). Four basic techniques: cognitive restructuring, psychodrama, healing the inner child, therapeutic holding (by therapist or foster parent). Results: 1) Myeroff: both groups were characterized as similar in demographic profiles. Tx group showed statistically significant decreases in aggressive (p.<02) and delinquent behaviors (p<.006) while the control group did not. 2) ACE long-term study: at six months children showed significant improvements (p<.05 or smaller) on six of eight CBCL subscales. The strongest improvements were noted for attention problems, followed by delinquent behaviors, aggressive behaviors, thought problems, anxiety/depression, and withdrawing behaviors. At 12 months the scores for anxious/depressed moods were the most improved category followed by thought problems, aggression, delinquent behavior and attention problem. The authors conclude results indicate consistent improvements whereby externalizing problems are the first to be affected and internalizing difficulties take a longer period to improve.	Though there are some promising results in these two studies, they lack strong control/comparison data, and have only small sample sizes. The "package" approach of attachment therapy makes it difficult to discern if similarly positive results could be achieved through less intrusive treatment protocols, or, in the case of the long term study through passage of time alone.
10	Myeroff, Mertlich & Gross (1999)  [same study as described under 1) in #23 below]	Quasi-experimental outcome study of 23 children at Evergreen  [same study as described under 1) in #23 below]	Two week intensive treatment of special needs adoptive children (n=12), quasi-experimental, non-random comparison group (n=11) <i>Measures:</i> CBCL one week prior to tx, and one week post tx (or at beginning and end of four week interval for control group)	[same study as described under 1) in #23 below]	

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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
11	O’Connor and Zeanah (2003)	Review and critique of current conceptualization, assessment and intervention; suggestions for alternative assessment and treatment guidelines	<ul style="list-style-type: none"> <li>• general and historical overview</li> <li>• existing strategies for assessment</li> <li>• alternative methodologies for assessment</li> <li>• need for clinical protocol</li> <li>• implications for treatment</li> <li>• lack of treatment guidelines</li> </ul>	<p>The interest and diagnosis of attachment disorders has not been matched by empirical investigations, especially for assessment and treatment. This lack of knowledge is exacerbated by <u>substantial differences among professionals about how phenomena are best defined or treated</u>. Reports and papers show inconsistencies in terminology which often does not match DSM-IV or ICD-10 definitions or concepts. There is more consistent validation for the “disinhibited” subtype in the literature while the “inhibited” form is rarely addressed. Systematic follow up of children with severe forms of attachment DO are still rare but it appears that difficulties in attachment behaviors can persist into adolescence and adulthood.</p> <p><u>Assessment</u>: There are no gold standards for assessment of AD/RAD. DSM and ICD-10 describe early onset as before age five which is not an empirically based cut-off. Some diagnostic criteria are rather vague and could be improved by providing a more specific language to describe typical behavioral symptoms. The inhibited category in particular does not match research results on secure/insecure/disorganized attachment behaviors making research and validation of this subtype difficult. Alternative definitions and symptom lists often fail to distinguish attachment behaviors from other emotional/ cognitive disorders or the natural range of temperaments. Authors suggest an alternative concept of “attachment spectrum” ranging from secure forms to ordinary form of insecure attachments to disorders of non-attachment (the latter being what is usually meant by attachment disorder today). Assessments should consist of systematic observations, interviews, questionnaires and assessment of social cognition (although existing instruments may not be specific enough). Behavioral descriptions may not be sufficient to assess children of preschool age or older.</p> <p><u>Treatment</u>: “No treatment method has been shown to be effective for children with attachment disorders.” (p.233). <i>Attachment based interventions</i> (some of which seem to have moderate effects) derive from attachment theory and target real-life interactions between infants and caregiver, usually focusing on the sensitivity and response of the caregiver, aiming to facilitate the caregiver’s capacity to serve as a secure base. However, this model does not</p>	Most current and thorough summary of concepts and research

				<p>account for children's disordered behavior whose caregivers seem adequately sensitive. <i>Holding therapies</i>: originate from alternative outdated concepts (such as rage reduction, developmental arrest etc.) and are not based on attachment theory. Some practices seem, in fact, contrary to attachment theory. At least two deaths in the USA have been attributed to treatments using aggressive holding models. <i>Family support and parent training</i>: Alleviating parents' frustration and stress is often a legitimate part of treatment (although carryover effects to children are not clear). Anecdotal evidence suggests that parent groups may be an effective model, including networks via internet. How to best involve adoptive/foster parents in treatment is not clear. Parents may display disengaged, frustrated relations to the child which can be mis-read by clinicians as the source of the disturbance (when it is a reaction to pre-existing attachment problems). While some behavioral improvements (not wandering off with strangers etc.) can be achieved, it is unclear whether these changes correlate with actual improvements in attachment to the caregiver. Respite care may be useful to relive familial stress but there are concerns about the appropriateness of this intervention for these children who are least likely to cope well with repeated separations. <i>Social-cognitive treatment</i> targets the behaviors and thinking patterns that underlie/accompany attachment disorders. They are, however, not yet specifically aimed or validated for children with attachment disorders.</p>	
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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
12	Solomon & George (1999)	Book about Disorganized Attachment		Part 1) Etiology Part 2) Social and cognitive sequelae of AD Part 3) AD in atypical populations Part 4) Adult and clinical applications	Not an easy read. By professionals for professionals
13	Steele (2003)	Editor's introduction to special issue on attachment theory and practices	Holding therapy is not attachment therapy	Emphasizing the ethos of Bowlby's initial concept of attachment and the need for a therapist to serve as a secure base, Steele entitles his editorial: "Holding therapy is not attachment therapy," and warns "Holding therapies have not been shown to be an effective clinical tool, and according to some practices may be seriously harmful and counter-therapeutic. The concept of attachment disorder, how it is assessed, and what diagnostic guidelines are most helpful/valid/reliable remains a matter of some debate, and is in urgent need of research." (p. 219). To date, there is no systematic evidence-based approach for treating children with attachment disorders, and the very concept of 'attachment disorders' remains controversial due to substantial questions about assessment and diagnosis.	
14	Taylor (2002)	Case study of eight year old girl diagnosed with RAD	Subject: eight year old adopted girl diagnosed with RAD. Treatment: Two sessions of Eye Movement desensitization and reprocessing (EMDR), accompanied and followed by supportive family therapy.	EMDR protocol was modified to focus on feelings of happiness and security (rather than on traumatic events which remained unknown) and to engage a child. Parents received supportive and educational therapy. After the first session mother and teachers reported positive changes in the girl's behaviors. The girl's behaviors toward the father changed from ignoring and being non-responsive to being more challenging and oppositional. A positive reframe of the change allowed the father to be more tolerant of the new engagement style. Twelve months post the EMDR treatment (family therapy had continued after EMDR) mother, child, and school reported the maintenance of positive development.	Interesting use of EMDR as one element of RAD treatment. EMDR itself is not entirely uncontroversial. It was developed for treatment of anxiety, trauma, and PTSD The traumatic history of the child here was inferred from the RAD diagnosis, but not known. The "package" approach makes it difficult to determine if EMDR was the effective treatment element in this case. Without empirically sound replication of this success, the use of EMDR with RAD children should be viewed very cautiously.

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#	Author(s) and Date	Type of Article	Key Variables/Components	Main Conclusions	Comments
15	Wilson (2001)	Review of Research, conceptualization and treatment of RAD	<p>Conceptualizations by Bowlby/ Ainsworth incl. the Strange Situation experiment, and more recent authors.</p> <p>Categorizations and criteria of authors and DSM-IV</p> <p>Reactive AD categorizations and criteria in DSM-IV, critique and different criteria</p> <p>Diagnostic instruments:                      Randolph Attachment Disorder questionnaire (Evergreen)                      Parent-Infant Global Assessment Scale                      RAD and Holding therapy</p>	<p><b>RAD and Holding therapy:</b> Wilson cites studies by Evergreen and concludes: "this preliminary evidence provides little validation for the use of such a controversial intervention" (p.48). Moreover, the studies showed the reduction of aggressive and delinquent behaviors they do not prove the formation of positive attachments (the stated goal of attachment therapy). The lack of long term data leaves the question if treated children will be able to form more stable attachments in adolescence or adulthood. Wilson cautions: critics of holding therapy have likened the techniques to brainwashing "in which individuals are belittled, degraded, and forced into submission" (p.47) whereby positive effects could well be attributed to fear rather than formation of attachment. Thus, "Testimonies of improvements should not be ignored, but they cannot be taken as scientific proof of the efficacy and validity of a practice... until such time as holding techniques can be empirically validated to improve the condition of RAD without excessive stress to the child, parents may be well advised to consider other options..." (p.49)</p>	
16	Zeanah (1996)	Conceptual article	<p>Is it reactive?</p> <p>Is it attachment?</p> <p>Is it a disorder?</p>	<p>Thorough review of current attachment concepts and diagnostic nosologies, with particular focus on reactive attachment disorder. Offers an alternative system for classifying AD on a spectrum.</p>	