Practice Parameter for the Assessment and Treatment of Children and Adolescents With Reactive Attachment Disorder and Disinhibited Social Engagement Disorder

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This Practice Parameter is a revision of a previous Parameter addressing reactive attachment disorder that was published in 2005. It reviews the current status of reactive attachment disorder (RAD) and disinhibited social engagement disorder (DSED) with regard to assessment and treatment. Attachment is a central component of social and emotional development in early childhood, and disordered attachment is defined by specific patterns of abnormal social behavior in the context of “insufficient care” or social neglect. Assessment requires direct observation of the child in the context of his or her relationships with primary caregivers. Treatment requires establishing an attachment relationship for the child when none exists and ameliorating disturbed social relatedness with non-caregivers when evident.

Key words: reactive attachment disorder, disinhibited social engagement disorder, indiscriminate behavior, indiscriminate friendliness, indiscriminate social behavior


METHODOLOGY

The initial literature search was conducted in May 2012 using PubMed, PsycINFO, and Cochrane Library databases. The initial search was limited to the date range January 1, 1998, to May 17, 2012. The search in PubMed used the MeSH term “reactive attachment disorders,” which yielded 307 results, and the following key words linked with the Boolean “OR”: “Reactive Attachment Disorders,” “Attachment Disorders,” “Indiscriminate Behavior,” “Indiscriminate Friendliness,” “Indiscriminate Socially Disinhibited Reactive Attachment Disorder,” and “Disinhibited Social Engagement Disorder,” which yielded 361 results. The search in PsycINFO used the thesaurus term “attachment disorder” and yielded 393 results. An advanced search linking keywords with the Boolean “OR” using the terms “Reactive Attachment Disorder,” “Attachment Disorders,” “Indiscriminate Behavior,” “Indiscriminate Friendliness,” “Indiscriminate Socially Disinhibited Reactive Attachment Disorder,” and “Disinhibited Social Engagement Disorder” yielded 287 results. The search was repeated in the Cochrane Library Database, yielding 2 results.

The initial search was extended in June 2016 using PubMed, PsycINFO, and Cochrane Library databases to cover the date range May 18, 2012, to June 15, 2016. The search in PubMed used the MeSH term “reactive attachment disorders,” which yielded 110 results, and the following key words linked with the Boolean “OR”: “Reactive Attachment Disorders,” “Attachment Disorders,” “Indiscriminate Behavior,” “Indiscriminate Friendliness,” “Indiscriminate Socially Disinhibited Reactive Attachment Disorder,” and “Disinhibited Social Engagement Disorder,” which yielded 154 results. The search in PsycINFO used the thesaurus term “attachment disorder” and yielded 119 results. An advanced search linking keywords with the Boolean “OR” using the terms

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ATTACHMENT AND ITS DEVELOPMENT

Attachment between an infant and his or her primary caregivers is a biologically driven process that results in organization of behaviors in the young child, especially behavior designed to achieve physical proximity to a preferred caregiver when the child is in need of comfort, support, nurturance, or protection. The process of attachment unfolds in the first years of life. Newborns recognize their mother’s smell and sound soon after birth but express no preference for a particular person to provide comfort for distress. Between 2 and 7 months of age, infants are motivated to interact socially with a variety of partners, familiar and unfamiliar. During this time, the infant may be more readily comforted by a familiar caregiver, although he or she is generally able to be soothed by unfamiliar adults as well. However, at around 7 to 9 months, infants begin to exhibit reticence around unfamiliar adults (stranger wariness) and to protest separations from familiar caregivers (separation protest). Once these behaviors have appeared, the infant is said to have formed a selective or preferred attachment.

Infants become attached to caregivers with whom they have had significant amounts of interaction. Although no definitive data are available, this appears to be true for small numbers of adults whom the infant learns through experience that he or she can count on to provide comfort, support, nurturance, and protection, especially in times of stress. These attachment figures appear to be arranged hierarchically by the infant in terms of strength of preference, so that the infant has a most preferred caregiver, a next most preferred caregiver, etc. There appear to be limits to infants’ capacities to attach to large numbers of caregivers, presumably because actual physical contact and regular interaction seems to be required for attachments to form. In institutions in which large numbers of caregivers work irregular shifts, many children develop little or no preference for one or more attachment figures. Nevertheless, the limit of how many different attachment figures an infant can have without problems ensuing is unknown.

Preferred attachments to caregivers may develop at any time after infants reach a developmental age of 7 to 9 months, provided that the caregivers have sufficient involvement with the child. Thus, young children removed from institutions or from neglecting families readily form attachments to their new caregivers, although the quality of these subsequent attachments can be compromised.

By 12 months of age, it becomes possible to assess the quality of an infant’s attachment to a preferred attachment figure. A laboratory paradigm, the Strange Situation Procedure, involves a series of interactions between a young child, an attachment figure, and an unfamiliar adult, including separations and reunions. During this procedure, individual differences in the organization of 11- to 20-month-old infants’ attachment behaviors as they are directed toward an attachment figure are described in four patterns of attachment—secure, avoidant, resistant, and disorganized.

The Strange Situation Procedure has been conducted in many cultures throughout the world. Although there is variability in distributions within and across different cultures, the same four patterns are evident. These patterns of attachment are relationship-specific rather than within-the-child traits in that the same child’s pattern of attachment may be different with different caregiving adults. These patterns have been associated with different types of caregiving in the first year of life and with differing adaptation in the preschool years and beyond.

For children 2 to 4½ years old, the MacArthur system (J. Cassidy, R. Marvin, unpublished, 1992) describes secure, avoidant, dependent (ambivalent), controlling, and insecure/other patterns of attachment. These classifications are derived from the same Strange Situation Procedure administered to infants, but the classifications are defined by different behaviors, with increased reliance on verbal rather than only motor behaviors.

Insecure attachment (avoidant or resistant attachment) is a risk factor for psychopathology, and secure attachment is a protective factor particularly within high-risk groups. Stronger links with psychopathology are evident for young children who exhibit disorganized attachments to their primary caregivers or other atypical attachment classifications such as insecure/other in preschool children.

The Strange Situation Procedure has been enormously useful in developmental attachment research; however, its routine clinical use is limited by the fact that it was not designed as a diagnostic procedure but rather as a laboratory observation of the balance between attachment and exploratory behaviors in young children in the presence of an attachment figure. Classifications of attachment are not diagnoses, nor does a particular classification necessarily dictate a specific clinical approach. Some attachment-based interventions do use the Strange Situation Procedure, but...
Attachment of young children to caregivers may be compromised by other risk factors that also give rise to psychiatric symptoms and disorders. This raises the question of how to define clinical disorders of attachment, that is, for those children for whom attachment disorders are the primary focus of treatment, as opposed to children with insecure or disorganized attachments who are at risk for subsequent disorders but are not currently displaying signs of a clinical disorder.

In contrast to patterns of attachment that are risk and protective factors, the DSM-5 and other nosologies are concerned with defining clinical disorders of attachment. In the DSM-5, RAD is defined by markedly disturbed and developmentally inappropriate attachment behaviors, in which a child rarely or minimally turns preferentially to an attachment figure for comfort, support, protection, and nurturance. The child rarely seeks comfort or responds to comfort when distressed, and is socially unresponsive and has emotion regulation difficulties. Signs of the disorder appear following extremes of insufficient care.

DSED is defined in the DSM-5 as aberrant behavior in which a child unhesitatingly approaches and interacts with unfamiliar adults. The child shows reduced or absent reticence about approaching strangers, overly familiar verbal or physical behavior, diminished or absent checking back with an adult caregiver after venturing away, even in unfamiliar settings, and/or a willingness to “go off with” an unfamiliar adult with minimal or no hesitation. As with RAD, these behaviors follow extremes of insufficient care.

**ONE DISORDER OR TWO?**

Reactive attachment disorder (RAD) was divided in the DSM-IV into two subtypes: an emotionally withdrawn/inhibited type and an indiscriminately social/disinhibited type. In contrast, the *International Classification of Diseases—10th Revision* (ICD-10) defined two disorders: reactive attachment disorder, corresponding to the emotionally withdrawn/inhibited type, and disinhibited attachment disorder, corresponding to the indiscriminately social/disinhibited type. The idea was that, in the former, young children with limited opportunities to form selective attachments were withdrawn and inhibited, with no consistent displays of attachment behaviors directed to anyone. The latter, on the other hand, was intended to identify young children who similarly lacked opportunities to form selective attachments and, in response, displayed attachment behaviors indiscriminately, even to complete strangers.

Recent reviews have shown that the evidence indicates that the two different types of RAD are actually two distinct disorders. The two disorders arise in similar conditions of risk: experiences that limit the child’s ability to form selective attachments, such as social neglect, frequent changes in caregivers, or deprivation that may occur in institutional settings. On the other hand, they differ with regard to phenomenology, correlates, course, response to treatment, and vulnerability factors, and this led to them being defined as distinct disorders in the *DSM-5*. In this conceptualization, RAD involves disordered attachment behaviors, but in DSED, the core abnormality concerns social disinhibition. Because DSED may occur in the absence of attachment, in an aberrant attachment or in a healthy attachment to a subsequent foster or adoptive parent, one may reasonably question whether it is an attachment disorder at all.

**CLINICAL PRESENTATION OF RAD**

RAD describes a constellation of aberrant attachment behaviors and other behavioral abnormalities that are believed to result from social neglect and deprivation. For this reason, it requires a history of serious social neglect. Lack of attachment to a specific attachment figure is exceedingly rare in reasonably responsive caregiving environments. In response to severely limited opportunities to form selective attachments, young children fail to develop attachments to any caregivers—this is the essence of the disorder.

Children with RAD do not initiate or even show much interest in interacting with caregivers, and social reciprocity is minimal or absent. These children have limited or no positive affect and often appear unresponsive. Children with RAD do not show consistent or robustly developed attachment behaviors—in fact, they rarely seek proximity to specific adults, fail to check in with adults, even those they have been repeatedly exposed to, and neither look for nor accept comfort from caregivers in times of emotional need. They also may display episodes of unexplained irritability, sadness, or fearfulness around familiar caregivers.

**COMORBIDITY OF RAD**

Only limited data are available at this time about disorders that might be comorbid with RAD. Yet, given that severe childhood adversity seems to increase risk for many types of psychopathology, it is likely that comorbidity is the rule rather than the exception. In particular, stereotypies and cognitive delays are both associated with deprived caregiving environments and often co-occur with RAD. In addition, comorbidity with depressive symptoms also has been noted in young children with histories of institutional rearing. Some maltreated children have been documented to show signs of both posttraumatic stress disorder (PTSD) and RAD, but no studies have yet documented the degree of comorbidity between RAD and PTSD. There is, however, longitudinal evidence that disorganized attachment in infancy is associated with the development of PTSD in school-aged children who were exposed to significant traumatic events and children diagnosed with RAD are likely to have such trauma exposure.

**DIFFERENTIAL DIAGNOSIS OF RAD**

RAD must be distinguished primarily from autism spectrum disorder (ASD), global developmental delay (GDD), and depression. Children with RAD share social withdrawal and reduced social reciprocity with children with ASD. Similarly, both disorders are often associated with cognitive delays and
motor stereotypes. On the other hand, in RAD, one should not see selective impairments in symbolic representation (i.e., pretend play and language) out of proportion to cognitive level. Furthermore, the restricted interests and preoccupations, which are part of the criteria for ASD, are not found in RAD. Children with RAD have deviant social and emotional behavior, reduced responsiveness and positive affect, and emotion regulation disturbances that are not part of global developmental delay. In depression, reduced positive affect and emotion regulation difficulties are similar to what is seen in RAD. There is no reason, however, to expect that the attachment behaviors of a young child with depression would be minimal to absent, as is the case in RAD.

**COURSE OF RAD**

Only one longitudinal study has examined the course of RAD. The Bucharest Early Intervention Project (BEIP) was the first (and so far only) randomized clinical trial of foster care as an alternative to institutional care among young children who had been abandoned and placed in institutions. Following baseline assessments in institutional settings, half of the sample was then randomly selected for placement into a foster care network that was created by the project because foster care was largely unavailable as an option in Bucharest when the study began. Children were 6 to 30 months old at the time of initial assessment, and they were systematically re-evaluated at 30, 42, and 54 months and then at 8 years. Although BEIP included multiple brain and behavioral outcomes, RAD and DSED were always a central focus of the study because they had been identified in descriptive studies of children raised in institutions throughout the latter half of the 20th century.

BEIP results demonstrated that young children who were randomly selected to be removed from institutions and placed in foster care showed an early and substantial decrease in signs of RAD compared to children who remained institutionalized for longer periods of time. After placement at a mean of 22 months of age, the group in foster care had levels of RAD comparable to never-institutionalized Romanian children living with their families by 30 months of age. On the other hand, for the group randomized to remain in institutional settings, there was moderate stability in signs of RAD from infancy through age 8 years. Those who remained the longest in institutional care had the most persistently high signs of RAD over time.

In addition, in studies of children adopted out of institutions, there have been no cases of RAD in follow-ups conducted months to years after adoption. In other words, once children are removed from the socially depriving environments of institutions and are placed with families, the emotional withdrawal and inhibition characteristics of children with RAD disappear.

There is no evidence to suggest that, once removed from deprivation, children with RAD reach an age at which they no longer can form attachments, although lasting developmental compromises have been described in extreme situations of deprivation such as with feral children. Nevertheless, less is known about the risk to long-term interpersonal relatedness and even psychopathology in individuals who have a history of RAD in early childhood. There are no data available about heterotypic continuity in RAD.

**EPIDEMIOLOGY OF RAD**

Few data exist about the prevalence of RAD. It is thought to be rare, but only one published community study has reported on prevalence. That study of 350 Romanian preschool children recruited from pediatric waiting rooms found no cases of RAD. In fact, even in a study of young children raised in institutional settings for varying amounts of time, the rates of the emotionally withdrawn/inhibited type of RAD in 54-month-old children was only 4.1%. On the other hand, this and another study demonstrated that as many as 40% of currently institutionalized young children show significant signs of RAD. Rates in young children newly placed in foster care are less clear, but signs of RAD have been reported in these populations. Beyond these extreme populations, RAD appears to be exceedingly rare. RAD is more common in children currently living in institutions and, given that RAD reliably improves when children are removed from institutional care, eliminating institutional rearing should be a priority (or improving them in contexts where they cannot be eliminated). Given that the DSM-5 criteria require a history of severely "insufficient care," the diagnosis should be questioned in any case in which a history of social neglect cannot be documented.

**ETIOLOGY AND RISK FACTORS OF RAD**

In the DSM-5, RAD is classified as one of a group of "trauma and stress-related disorders." As such, the etiology of the disorder is specified in the diagnostic criteria. The phenotype of RAD must have resulted from the child’s experience of severely "insufficient caregiving," which is operationalized as social neglect or deprivation, repeated changes of primary caregivers, or rearing in institutions with high child-to-caregiver ratios. Research has confirmed that children who have experienced adverse, neglectful caregiving environments have an increased risk of RAD compared to children who are raised in lower-risk environments. In fact, the phenotype of RAD has not been reported in young children in the absence of a history of neglect.

In a study of young children living in large institutions, individual differences in observed quality of caregiving were related to individual differences in signs of RAD, even after controlling for other child and environmental characteristics. This implies that the degree of adversity in the caregiving environment is an important factor in the appearance of RAD. Intraindividual vulnerability factors have not yet been identified that may clarify who does and does not develop RAD given the presence of known risk factors.

**CLINICAL PRESENTATION OF DSED**

Children with DSED also have a history of social neglect, but they are usually affectively brighter and more social than children with RAD. The essence of DSED is socially disinhibited behavior with strangers. Affected children lack...
restraint around adults whom they do not know, instead approaching and engaging them. In fact, they are notably willing to leave caregivers and accompany or "go off" with complete strangers without hesitation. Children with DSED often are intrusive and lack appropriate social and physical boundaries, and are emotionally “over bright” and attention seeking. Their “friendliness” is often described by caregivers as uncomfortable, and the attention seeking can include aggressive behavior at times, although studies of aggression and indiscriminate behavior in children raised in institutions have shown that they are largely independent.10,37,50

Children may exhibit signs of DSED whether or not they have formed preferred attachments. That is, some children turn preferentially for comfort to a preferred attachment figure, but they still show lack of reticence about approaching, engaging with, and even going off with strangers. Because DSED has been documented in children who have and in those who have not developed preferred attachments,10,12,50-53 there is reason to question why DSED should be defined as an attachment disorder. This is a major reason why the DSM-5 has defined the disorder as disinhibited social engagement disorder, distinguishing it from RAD.28

COMORBIDITY OF DSED

In addition to indiscriminate behavior, social deprivation in early childhood also produces large rates of inattention/overactivity,34 and comorbidity of attention-deficit/hyperactivity disorder (ADHD) and DSED has been documented in preschool-37 and school-aged children.32 Although not studied systematically, PTSD also has been reported to co-occur with DSED in young maltreated children.58

Two independent groups studying children adopted out of severely deprived institutions have reported that some children display features described as “quasi-autism.”55,56 At age 4 years, these children met full clinical criteria for autism, but by age 6 years, they no longer showed all the features of autism. Instead, they exhibited odd relatedness, including some indiscriminate behavior, and they continued to show some peculiar interests, but they had more flexible communicative abilities than is typical in autism. Some evidence suggests that it may be social communicative deficits that are most impaired in children who experience institutional rearing.57 When followed up farther into school age and adolescence, 7 of 15 children with quasi-autism showed indiscriminate behavior characteristic of DSED.58 It is worth noting, however, that the majority of children with indiscriminate behavior have not been reported to show features of quasi-autism.10,37,58-63

DIFFERENTIAL DIAGNOSIS OF DSED

Children with DSED must be distinguished from children with high levels of sociability and from children with ADHD. The distinction between highly sociable and indiscriminate behavior hinges on the degree to which the child violates accepted social norms for social boundaries and the degree of functional impairment associated with the disorder. More of each suggests DSED. For ADHD, the impulsivity is usually behavioral and cognitive and only sometimes social, whereas in DSED, the impulsivity is social. In studies of indiscriminate behavior, cognitive inhibitory control and behavioral impulsivity, some clustering is apparent, but these do appear to be distinct phenomena.37,42,51,58

COURSE OF DSED

DSED appears to follow a more variable course than RAD. The stability of indiscriminate behavior is modest to moderate, both in institutionalized37 and in formerly institutionalized children.42 That is, longitudinal studies that have followed up children from a few years37,52 to more than a decade42,58 consistently have shown that if children raised in institutions show indiscriminate behavior when first assessed, a minority of them continue to show indiscriminate behavior, even if they are later adopted or placed with families. For example, in the BEIP, reduction in signs of DSED were less dramatic than the consistent and almost complete reduction in signs of RAD following placement in families.31

Generally, the earlier that a young child can be placed in an environment conducive to the development of preferred attachment the better, but the long-term outcomes of children diagnosed in early childhood with DSED is not well established. In children raised in institutions who were followed up from less than 30 months of age to 54 months of age, signs of DSED were predictive of overall psychiatric impairment at 54 months.37 Still, little is known about individual differences in prognosis, as risk and protective factors have not been well delineated among children with this disorder. In fact, the available data suggest that there are significant individual differences in the course of DSED, with some children showing sharp and consistent declines in indiscriminate behavior and others showing long-term (years’) persistence. No data are yet available about heterotypic continuity of DSED, although indiscriminate behavior in early childhood has been associated with difficulties initiating and responding competently to peer relationships in adolescents.43

EPIDEMIOLOGY OF DSED

The prevalence of DSED also is not completely clear because the condition has not been subjected to large, community-based studies explicitly designed to estimate prevalence. Nevertheless, DSED occurs only in a minority of children who have been severely neglected and subsequently placed in foster care or in those raised in institutions. Even in such high-risk populations, the condition occurs in fewer than 20% of children.37,42,63 DSED has not been studied as thoroughly in other contexts of serious environmental risk.

Only one published study has explicitly reported on the community prevalence of DSED in preschool children. In a study of 350 Romanian preschool children recruited from pediatric clinics, Gleason et al.44 reported a point prevalence for DSED of 2%. This is in contrast to the finding that even among children 2.5 to 4.5 years old, who had histories of
being raised for variable times in institutions, the rates were 17% to 18%. Signs of indiscriminate behavior are definitely elevated in preschool children following institutional rearing and social neglect, although they also have been reported in a few young children with no histories of either.

ETIOLOGY AND RISK FACTORS FOR DSED

DSED shares the same etiology as RAD, that is, the child with the disorder must have experienced “insufficient caregiving” severe enough to explain the phenotype. Studies of children who have been maltreated and those raised in institutions have confirmed that indiscriminate behavior, the central feature of the phenotype, is increased compared to that in children who have not experienced such extremes of care.

One group of children with high levels of indiscriminate social behavior but no evidence of social neglect are those diagnosed with Williams syndrome, which results from a deletion in the long arm of the seventh chromosome. Tager-Flusberg and colleagues (personal communication, June 10, 2007) assessed a small number of children diagnosed with Williams syndrome who had no history of adverse experiences, and found that parents reported that the children had extremely high levels of indiscriminate behavior. Data on children with Williams syndrome indicate the importance of maintaining the insufficient caregiving as a criterion to define DSED to distinguish indiscriminate behavior resulting from social neglect from that due primarily to genetic and/or neurodevelopmental abnormalities. The required history of extremely insufficient caregiving also is important because otherwise it might be challenging to distinguish children with core signs of the disorder from those with high levels of sociability.

It is clear from the relative rarity of DSED that most children exposed to adverse caregiving environments do not develop the disorder, raising questions about vulnerability and protective factors. There are active explorations in this area, but results to date are only preliminary. For example, Drury et al. showed that among children raised in institutions, those who have both the met allele of BDNF and the short allele of the serotonin transporter gene have the most signs of indiscriminate behavior while living in institutions, but also the lowest levels of indiscriminate behavior once they have been placed in the enhanced caregiving environment of high-quality foster care. Thus, specific genotype variations appear differentially susceptible to the quality of the caregiving environment. A more recent study replicated the association of indiscriminate behavior and the short allele of the serotonin transporter gene but failed to replicate the BDNF association. As the authors noted, this finding is more clearly diathesis stress than differential susceptibility.

EMERGING DATA IN OLDER CHILDREN

There has been considerable controversy regarding diagnosis of RAD and/or DSED in school-aged children, adolescents or adults. This controversy relates to concern about imprecise diagnostic extension of attachment disorders to cover a variety of interpersonal difficulties in individuals who have a history of early deprivation, especially signs of oppositional defiant disorder, conduct disorder, or even psychopathy in childhood. A large number of psychiatric diagnoses include children who have problems with intimate relationships, and attachment disorders were never intended to include all forms of interpersonal problems. Only when the primary presenting problem is either the social reticence core to RAD or the socially disinhibited behavior defined by DSED should those diagnoses be considered. On the other hand, there is an emerging body of research on attachment disorders in school age children and adolescents. This research has demonstrated that signs of RAD and DSED are demonstrable in school-aged children and adolescents with histories of institutional rearing and maltreatment who are adopted or placed in foster care but also studies identifying these disorders in impoverished populations of children in whom maltreatment is not specifically identified. Two studies have demonstrated discriminate validity of RAD compared to ASD and ADHD. These investigations, despite some variability in measures and assessment methods, represent findings from multiple research groups studying children in different countries who experienced various types of insufficient care, and have provided preliminary evidence that parents of at least some older children who have experienced insufficient care endorse signs of RAD and DSED.

Recent studies have demonstrated extensive comorbidity in older children and adolescents diagnosed with attachment disorders and have addressed the discriminate validity of RAD as compared to ASD. In addition, intellectual disabilities, language problems, and learning difficulties all have been identified in school-aged children with RAD and DSED.

A number of studies in older children and adolescents also have begun to explore the neurobiology of RAD and DSED. For example, Tottenham et al. studied 4- to 17-year-old children with histories of institutional rearing by presenting them with images of mother versus stranger and recording amygdala activation during functional magnetic resonance imaging (fMRI) scanning. As predicted, reduced amygdala differentiation correlated with greater reports of indiscriminate behavior. In addition, later adoption (i.e., more institutional rearing) was associated with reduced amygdala discrimination and more indiscriminate behavior.

Shimada et al. used fMRI to assess children and adolescents with RAD and typically developing controls. They reported reduced gray matter volume in the left primary visual cortex in children with RAD compared to that in typically developing children. Reduced gray matter volume was associated with an increased number of internalizing problems. Investigators suggested that the results made sense because the visual cortex is part of the neurocircuitry regulating the stress response to emotional visual images.

Reward processing has been proposed as a deficit in RAD. Two small studies from the same research group in
Japan assessed children and adolescents with RAD using functional imaging. Both studies used tasks with high and low monetary rewards. In one, investigators compared children with RAD to a group of children with ADHD and a nonaffected control group. In the other, a larger group of children with RAD were compared to nonaffected controls. In both studies, significantly reduced activity in the striatum (caudate and nucleus accumbens) was observed during the high monetary reward condition in the children with RAD compared with other groups of children. The problem is that diminished reward sensitivity has been shown to be reduced in children who have experienced adversity, so whether the findings are specific to RAD is unclear.

All of these new findings notwithstanding, the major question about results from studies of RAD and DSED in older children concerns measurement. These disorders were originally defined and, until recently, studied almost exclusively in younger children. In extending criteria to older children, several different measures have been used, many of which include signs and symptoms that do not derive from criteria in established nosologies, such as avoiding eye contact and misunderstanding emotions. Even those who have used a well-developed multi-method approach, with screening, and observational paradigms, it is unclear whether this is the same disorder that has been defined and studied in young children.

More research is needed on the continuity of RAD from early to middle childhood, because it is not completely clear whether in middle childhood RAD remains largely unchanged from early childhood, is stable but developmentally different in its phenomenology, or no longer exists as a distinct disorder. Only one study has assessed a sample longitudinally from early to middle childhood, but stability was not reported. A recent study using the same structured interview in early adolescence that had been used in early childhood demonstrated elevated signs of RAD in adolescence much as they had been in early childhood in children who had experienced exposure to lengthy institutionalization.

For DSED, the stability of indiscriminate behavior from early to middle childhood appears to be limited by a moderate range, and there has been more consistency in its definition. In adolescence, indiscriminate behavior may extend beyond relations with caregivers to peer relations, such as developing new acquaintances as “best friends” or demonstrating shallow and frequently changing friendships.

EVIDENCE BASE FOR PRACTICE PARAMETERS

In this Parameter, recommendations for best treatment practices are stated in accordance with the strength of the underlying empirical and/or clinical support, as follows:

- Clinical Standard [CS] is applied to recommendations that are based on rigorous empirical evidence (e.g., meta-analyses, systematic reviews, individual randomized controlled trials) and/or overwhelming clinical consensus
- Clinical Guideline [CG] is applied to recommendations that are based on strong empirical evidence (e.g., non-randomized controlled trials, cohort studies, case-control studies) and/or strong clinical consensus
- Clinical Option [OP] is applied to recommendations that are based on emerging empirical evidence (e.g., uncontrolled trials or case series/reports) or clinical opinion, but lack strong empirical evidence and/or strong clinical consensus
- Not Endorsed [NE] is applied to practices that are known to be ineffective or contraindicated

The strength of the empirical evidence is rated in descending order as follows:

- [rct] Randomized, controlled trial is applied to studies in which participants are randomly assigned to two or more treatment conditions
- [ct] Controlled trial is applied to studies in which participants are nonrandomly assigned to two or more treatment conditions
- [ut] Uncontrolled trial is applied to studies in which participants are assigned to one treatment condition
- [cs] Case series/report is applied to a case series or a case report

RECOMMENDATIONS

Assessment

Recommendation 1. For young children with a history of foster care, adoption, or institutional rearing, clinicians should inquire routinely about a) whether the child demonstrates attachment behaviors and b) whether the child is reticent with strangers. [CS]

The purpose of screening for RAD and DSED is to determine whether more formal assessment for these disorders is necessary. In the absence of validated screening instruments for RAD and DSED, clinicians should both ask about and observe attachment in the young child directed towards the parent/caregiver. For example, does the child turn preferentially to parent figures for comfort, support, nurturance, and protection? Does the child show stranger wariness during clinical assessments? Does the child protest separation from familiar caregivers if they leave? Second, clinicians should inquire about a history of institutional rearing, foster care, or adoption (especially international adoption). Clinicians should have a low threshold for more in-depth assessment.

To consider RAD in children older than 5 years, there should be a history of recent and severe deprivation. Once
children with RAD are placed in families, signs of the disorder seem to disappear as the child forms new attachments.12,37 DSED, on the other hand, does in some cases persist for years, even after the child forms attachments in families.37,42,52 For older children and adolescents, inquiring about indiscriminate behavior with peers is indicated. For example, does the child or adolescent claim “close” friendships with relatively new acquaintances?

**Recommendation 2.** The clinician conducting a diagnostic assessment of RAD and DSED should obtain direct evidence from both a history of the child’s patterns of attachment behavior with his or her primary caregivers and observations of the child interacting with these caregivers. [CS]

The AACAP Practice Parameter on assessment in infancy and early childhood includes basic approaches to clinical assessment of children under 5 years, which may be useful for evaluation of RAD.96 The caregiver’s report of the child’s attachment behavior also can be useful. The clinician should gather a detailed history about, for example, the child’s pattern of comfort seeking, beginning with the onset of stranger wariness and progressing through to the time of assessment. In addition to comfort seeking, the clinician should inquire about separation protest, which peaks at around 18 months of age but typically continues into the preschool years.

Data about the child’s behavior in child care settings or schools may be useful as an indication of the child’s typical behavior in the absence of the parent/caregiver. Teacher reports of extreme withdrawal or indiscriminate behavior could raise suspicion about RAD or DSED.

Observational data is always helpful in the diagnosis of RAD, and asking the caregiver to separate from the child by leaving the room to elicit attachment behaviors often provides useful data.22 Observing the child’s approach to and interaction with the clinician permits an in vivo examination of the child’s behavior with strangers. Comparing the child’s behavior with familiar and unfamiliar adults is necessary for diagnosis. One observational procedure is presented in more detail below. Ideally, a complete assessment involves more than one observation, with interviews helping to determine how typical the observed behavior is.97

**Recommendation 3.** The clinician may be aided in making the diagnosis of RAD and DSED by a structured observational paradigm that compares the child’s behavior with familiar and unfamiliar adults. [OP]

The caregiver–child relationship forms both the basis for assessment of signs of RAD and DSED and the nexus for monitoring interventions for RAD. Structured observations allow the clinician to capture how the child behaves with a familiar and an unfamiliar adult, especially if the interactions are conducted in parallel.62 A number of approaches to structuring a comprehensive assessment of a caregiver–child relationship have been described96,99 other than the Strange Situation Procedure, which has been extensively validated16,19,20,21 but is more likely to be used for research purposes. These alternative approaches generally involve some combination of episodes such as play, teaching, and separation/reunion and involve careful observations of how the child behaves with a preferred attachment figure compared with an unfamiliar adult. Other approaches more specifically designed to assess caregiver–child attachment also have been studied.62

If attached, the child should exhibit clear preferences for the attachment figure for nurturance, support, comfort, and protection. A separation is expected to be mildly stressful for young children and is often included to increase the probability of observing young children when they are motivated to seek comfort.

One possible model of assessment (to date, unvalidated) for children from 1 to 5 years of age is outlined in Table 1. The procedure described in Table 1 was designed for use by clinicians working in office or clinic settings. It can be administered without additional adults being involved, although ideally it is videotaped for later review. An observation room with a one-way mirror allows the clinician to observe the parent and child during Episode 5, but if such a setting is not available, the caregiver can later report on the child’s behavior during the clinician’s absence. The novel (scary) toy episode is included so that the clinician may observe preferential comfort seeking, but it is not essential to include. Throughout the procedure, the emphasis is on comparing the child’s behavior with the familiar attachment figure (i.e., parent/caregiver) and unfamiliar adult (i.e., clinician).

DSED can be assessed in many of the same paradigms as RAD, including the one outlined in Table 1, but it is imperative that a stranger interaction be included because behavior with unfamiliar adults comprises the crucial data necessary to make a diagnosis. Other research coding systems have been used to assess the child’s behavior with the stranger in the Strange Situation Procedure, but these are less useful clinically.12,52

There is no formal scoring system for the procedure in Table 1; rather, the clinician’s conclusions about differences in the child’s behavior with familiar and unfamiliar adults are sufficient to inform the diagnostic process. Training in structured observational paradigms to assess attachment is always recommended,26 although specialized centers may be necessary to obtain such training.

**Recommendation 4.** Clinicians should perform a comprehensive psychiatric assessment of children with RAD or DSED to determine the presence of comorbid disorders. [CS]

Research to date indicates substantial levels of psychiatric and social impairment and comorbidity in children with RAD and DSED. What evidence exists suggests that signs of RAD diminish rapidly after children are placed in good-enough caregiving environments.12,41,52 On the other hand, children with RAD may show continuing impairment in family and social relationships, even after signs of the disorder diminish in adequate caregiving environments.41 This suggests that careful evaluation of all aspects of the child’s functioning is necessary, even after the child is in an adequate caregiving environment.

Similarly, young children in foster care and post-institutionalized children often show high levels of indiscriminate behavior when assessed soon after entry.42,45
Clinical experience suggests that this often remits if they receive good enough care from foster or adoptive parents. Severely deprived, institutionally reared children who remain in institutions, on the other hand, are more likely to show persistent indiscriminate behavior over time.41,43 Research also has linked indiscriminate behavior with cognitive impairment, inattention/overactivity, externalizing problems, problems with inhibitory control, and electroencephalographic (EEG) abnormalities. 37,51,53,54,58,61 All of these findings suggest that comprehensive assessments of children with signs of DSED are indicated, including use of structured interviews.

There is evidence that maltreated children generally do not receive adequate assessment and intervention for developmental delays, language disorders, and medical conditions.34 Age-appropriate screens for developmental delays, speech and language functioning, and referral for a general pediatric examination and routine testing are often necessary. Although children with RAD or DSED may show improvements in developmental delays when placed in enhanced caregiving environments, they should receive appropriate referrals for those delays in case they need additional interventions.

Recommendation 5. The clinician should assess the safety of the current placement for previously maltreated children with negative behaviors who are at high risk for being re-traumatized. [CS]

Either an early history of social neglect, serial placements in foster care, or institutional rearing in early childhood appear to be necessary for diagnosis of RAD and DSED. For this reason, clinicians who observe signs of RAD or DSED should consider the possibility that the child has experienced neglect, unless there is a plausible alternative explanation. Children with a history of serious adversity, of course, may present with a variety of negative behaviors that are difficult for caregivers to manage. Clinical judgment regarding the appropriateness of a given placement should include consideration of family support and stability, caregiver psychopathology, and response to previous interventions and willingness to take responsibility for the plight of the child, and severity and pattern of previous abuse.100,101 After assessment, any suspicion of previously unreported or current maltreatment requires reporting to the appropriate protective services authorities and/or law enforcement.

**TABLE 1** Clinical Observation of Attachment57

<table>
<thead>
<tr>
<th>Episode</th>
<th>Duration</th>
<th>Action</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5 minutes</td>
<td>Clinician observes parent—child “free play.”</td>
<td>Note especially familiarity, comfort, and warmth in child as he/she interacts with attachment figure.</td>
</tr>
<tr>
<td>2</td>
<td>3 minutes</td>
<td>Clinician talks with, then approaches, then attempts to engage child in play.</td>
<td>Most young children exhibit some reticence, especially initially, about engaging with an unfamiliar adult.</td>
</tr>
<tr>
<td>3</td>
<td>3 minutes</td>
<td>Clinician picks up child and shows him/her a picture on the wall or looks out window with child.</td>
<td>This increases the stress for the child. Again, note the child’s comfort and familiarity with this stranger.</td>
</tr>
<tr>
<td>4</td>
<td>3 minutes</td>
<td>Caregiver picks up child and shows him/her a picture on the wall or looks out window with child.</td>
<td>In contrast to stranger pick-up, child should feel obviously more comfortable during this activity.</td>
</tr>
<tr>
<td>4a*</td>
<td>1 minute</td>
<td>Child is placed between caregiver and stranger and remote control novel (e.g., scary/exciting) toy is introduced.</td>
<td>Child should seek comfort preferentially from parent. If interested rather than frightened, child should share positive affect with parent.</td>
</tr>
<tr>
<td>5</td>
<td>3 minutes</td>
<td>Clinician leaves the room.</td>
<td>This separation should not elicit much of a reaction in the child, as the clinician is a stranger.</td>
</tr>
<tr>
<td>6</td>
<td>1 minute</td>
<td>Clinician returns.</td>
<td>Similarly, the child should not be much affected by the stranger’s return.</td>
</tr>
<tr>
<td>7</td>
<td>3 minutes</td>
<td>Caregiver leaves the room.</td>
<td>Child should definitely take notice of caregiver’s departure, although not necessarily exhibit obvious distress. If the child is distressed, the clinician should be of little comfort to the child.</td>
</tr>
<tr>
<td>8</td>
<td>1 minute</td>
<td>Caregiver returns.</td>
<td>Child’s reunion behavior with caregiver should be congruent with separation behavior. That is, distressed children should seek comfort, and nondistressed children should re-engage positively with caregiver, by introducing him or her to the toy or activity or talking with him or her about what occurred during the separation.</td>
</tr>
</tbody>
</table>

*Note: The general rationale for the procedure is to compare the child’s behavior with the putative attachment figure to the child’s behavior with the stranger, especially with regard to degree of comfort, showing warmth and affection, reliance for help, cooperation, and seeking comfort when afraid or distressed. |

*Optional episode.*
Treatment

Recommendation 6. The most important intervention for young children diagnosed with RAD or DSED is ensuring that they are provided with an emotionally available attachment figure. [CS]

Sensitive caregiving and psychological investment in the child—essential ingredients of healthy attachments—are the most important component of an intervention for these disorders.13[rci] Although children with RAD always lack well-formed attachments to adult caregivers, children with DSED only sometimes do.9,10,37 That is, children with DSED may have no attachments, insecure attachments, or healthy and robust attachments to foster or adoptive parents. If they lack attachments, that should be the first priority of treatment.

The building blocks of secure attachment are interactive moments in which the caregiver’s sensitively attuned behavior serves to help the child develop an internal sense of security. There are two basic psychotherapeutic modalities to help children with RAD and their caregivers attune to each other and interact more positively: working through the caregiver, and working with the caregiver–child dyad (and/or family) together. Working with the child alone will most likely occur only during assessment, because the emphasis during intervention is facilitating the construction of a lasting attachment relationship for the child with a devoted caregiver.

First, the clinician can work through the caregiver, by helping him or her learn how to establish positive interactions with a difficult-to-reach child, by helping the caregiver manage the child’s behavior, or by working intensively to address the caregiver’s own feelings of anxiety, frustration, or anger when needed. It is not uncommon for caregivers of children with RAD to feel disconnected from the child and to react with anger or anxiety. Patterns of discipline can become overly authoritative, leading to further disruption in the child’s attachment behavior. Allowing the caregiver to tell about his or her relationship with the child and reviewing that narrative for evidence of distortion or derogation is an important part of assessment and a first step in selecting an approach to intervention. Generally, this can be done as part of the open-ended assessment of the caregiver’s view of the relationship.

When a caregiver is not extremely stressed and the clinician has established, through observation and interview, that the caregiver is emotionally available and readily able to reflect on the child’s feelings, it may be possible to train the caregiver as a co-therapist and work to strengthen the child’s attachment with the caregiver by encouraging sensitive responsiveness. Structured intervention approaches using video review are available for those clinicians who obtain training. For example, Video-based Intervention to Promote Positive parenting (VIPP) is a brief home-based attachment intervention delivered in four home visits.102 Similarly, Circle of Security, originally developed as a group psychotherapy for parents, has recently developed a DVD-based, 8-session parenting intervention.103 Neither of these approaches has yet been studied in children with RAD or DSED, although they have been shown to enhance secure attachment in dyads, including those at high social risk in which children show disorganized attachment.

In cases in which caregivers are too overwhelmed for coaching techniques, other approaches should be used. It is not often possible for highly stressed caregivers who have negative perceptions of their children to maintain sensitive responsiveness until the caregivers are less stressed. Dyadic work (therapy with the child and primary caregiver together) is a second basic modality for working to address symptoms of RAD.104,105 Two different models of dyadic interactive therapy supported by randomized clinical trials are child–parent psychotherapy106[rci] and Attachment and Biobehavioral Catch Up.107[rci] Although neither has been examined formally in children with attachment disorders, each has been evaluated in children with disturbed attachment relationships.108[rci],109[rci],110[rci] Child–parent psychotherapy focuses primarily on the caregiver’s and child’s experience of one another and on altering patterns of emotional communication in the dyad. The therapist helps the caregiver to appreciate the emotional experience of the child and its connection to the emotional experience of the caregiver. Attachment and Biobehavioral Catch-Up uses videotape review of caregiver–child interaction for the clinician to review with the caregiver while attempting to shape (mostly through suggestion and positive reinforcement) the caregiver’s responses.

A basic tenet in dyadic therapy is to focus on parenting strengths as reflected in observed moments of clear caregiver–child engagement.99,104 Once trust is built through positive reinforcement of the caregiver, the therapist can point out and process moments of frustration and disenchantment in order to begin to reshape the interactions. Reviewing videotaped sessions can be useful to enhance reflective functioning about interactive behavior that is more difficult to do in the actual moment.

Recommendation 7. For young children diagnosed with DSED, limiting contacts with noncaregiving adults may reduce signs of the disorder. [OP]

The data about effects of caregiving quality on signs of DSED are much less straightforward than the data linking caregiving quality and signs of RAD.10,37,45 Enhancing caregiving by placing children into foster or adoptive homes from conditions of neglect may be helpful in reducing signs of DSED, but additional measures may be indicated. Clinical experience suggests that reducing the child’s exposure to persons beyond the immediate family for several months after a new placement begins may reduce or eliminate indiscriminate behavior, at least in some cases.

Recommendation 8. Clinicians should recommend adjunctive interventions for children who display aggressive and/or oppositional behavior that is comorbid with DSED. [CS]

A minority of children with DSED may have concurrent oppositional and/or aggressive behaviors, which also are sequelae of adverse experiences.37 In those instances, evidence-based treatment approaches for aggression, disruptive or antisocial behavior, such as parent–child interaction...
therapy for younger children\textsuperscript{109[ref]} or multisystemic therapy for older children,\textsuperscript{10[ref],111[ref]} may augment the therapeutic interventions outlined in recommendation 6.

**Recommendation 9. Psychopharmacological interventions are not indicated for the core features of RAD or DSED.** [NE]

No psychopharmacological intervention trials for RAD or DSED have been conducted, nor are there any indications for medication for the treatment of these disorders. However, pharmacological intervention for comorbid disorders—such as related anxiety disorders, ADHD, or mood disorders—may be indicated when comprehensive assessment demonstrates ongoing symptoms and impairment. On the other hand, the lack of available data on both short-term and long-term effects of pharmacological agents on young children’s rapidly developing brains reinforces the need for a cautious approach to pharmacological intervention, particularly in preschool-aged children.\textsuperscript{112}

**Recommendation 10. Clinicians should not administer interventions designed to enhance attachment that involve noncontingent physical restraint or coercion (e.g., “therapeutic holding” or “compression holding”), “reworking” of trauma (e.g., “rebirth therapy”), or promotion of regression for “reattachment” because they have no empirical support and have been associated with serious harm, including death.** [NE]

Establishing authority and effective limit-setting arguably are important components of any parent—child treatment. In fact, physical restraint for extreme aggression and uncontrolled behavior is sometimes necessary for protection of the child or family members.\textsuperscript{113} However, attempting to promote “reattachment” through coerced and noncontingent holding for purposes of inducing rather than containing rage is more likely to be experienced by a child as humiliating and frightening, and these approaches should be avoided.

The risks to the child involved in these nontraditional approaches are unacceptably high. Six child deaths have been attributed to prescription of these approaches.\textsuperscript{114} For these reasons, the American Academy of Child and Adolescent Psychiatry, the American Psychiatric Association, and the American Professional Society on the Abuse of Children all have issued policy statements opposing coercive therapies for children with serious disturbances of attachment.\textsuperscript{115,116}

**PARAMETER LIMITATIONS**

AACAP Practice Parameters are developed to assist clinicians in psychiatric decision making. These Parameters are not intended to define the sole standard of care. As such, the Parameters should not be deemed inclusive of all proper methods of care or exclusive of other methods of care directed at obtaining the desired results. The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all of the circumstances presented by the patient and his or her family, the diagnostic and treatment options available, and available resources.
REFERENCES


