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Identifying Reactive Attachment Disorder (RAD) and Disinhibited Social Engagement Disorder (DSED) in a clinical sample of high risk children

Abstract

Attachment relationships are the relationships that form between caregivers and infants, these critically important relationships become the building blocks for further social development. Disturbances in such relationships can have long term detrimental effects on children. Two attachment disorders have been identified in young children Reactive Attachment Disorder and Disinhibited Social Engagement Disorder. Unfortunately, many children who do not meet the full criteria for a diagnosis of either of these disorders may still present with symptoms that will cause disturbances in their development. Thus it is important to view these disorders as existing on a spectrum in order to adequately provide care to children who need it. If left unaddressed these non-diagnostic warranting symptoms can continue to cause disturbances in development.

Keywords: Reactive Attachment Disorder (RAD), Disinhibited Social Engagement Disorder (DSED), attachment relationships, pediatric interventions

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Introduction

Children who have experienced maltreatment, neglect, unstable care or other various forms of trauma during the course of their early development are at high risk of developing attachment disorders, which may manifest as either Reactive Attachment Disorder (RAD) or Disinhibited Social Engagement Disorder (DSED).[1] Experiencing trauma places children at risk for experiencing toxic stress. Furthermore, suffering trauma or severe stress in the context of RAD or DSED amplifies the likelihood that children will experience toxic stress. According to the Diagnostic Statistical Manual for Psychiatric disorders fifth version (DSM-5), attachment disorders RAD and DSED are categorized among trauma and stress related disorders.[2] RAD is a mental health diagnosis that requires a child to demonstrate a consistent pattern of inhibited and emotionally withdrawn behavior toward adult caregivers, persistent social or emotional disturbances, and have a history of insufficient care. Children diagnosed with RAD rarely seek or respond to comfort when distressed.[3] RAD is more likely to be identified if a child has experienced severe neglect or maltreatment during early childhood in the form of deprivation of basic emotional needs (i.e., comfort, stimulation, and affection by caregiving adults), being raised in unusual settings, or multiple transitions between primary caregivers early in development. In order to diagnose RAD, the disturbance must be identifiable before a child is 5 years of age. Furthermore, the child must have a cognitive age of 9 months at the time of diagnosis to ensure that the child is developmentally capable of demonstrating a focused attachment and to avoid misdiagnosis.[2] Among high-risk groups of children, RAD affects a very small percentage, with a prevalence of 4 – 40%.[4] A common feature of children diagnosed with RAD is separation from biological parents and institutional care. RAD also may be more evident at time of new placement after removal from previous caregivers/biological parents even in the presence of consistent caregiving. For the majority of children with RAD, symptoms resolve when placed in the care of responsive caregivers. But for a minority of children, continued symptomatology may contribute to suboptimal parental support that increases the risk for these children to experience further toxic stress. In response to the variance of symptoms of RAD, a second classification of attachment disorder was created. Disinhibited Social Engagement Disorder (DSED) is a mental health diagnosis that requires a child to demonstrate a pattern of socially disinhibited behavior and indiscriminate friendliness with unfamiliar adults, as described by the DSM-5 (American Psychiatric Association, 2013). DSED diagnosis shares much in common with RAD including age of onset, the duration of symptoms, and etiology criterion. DSED is most prevalent in young children who have a history of social neglect and placement in institutional care. Yet many of these children exude brightness and sociability with minimal social boundaries with strangers, particularly adults. Furthermore, children with symptoms of DSED lack hesitation when approaching, engaging, and leaving with strangers, and thus, are socially vulnerable. Regardless of the attachment between a caregiver and a child, caregivers report the "friendliness" of children with DSED can be an uncomfortable experience.[2] In addition to indiscriminate friendliness, social deprivation in early childhood also produces symptoms of inattention and hyperactivity that are commonly seen in children with DSED. The distinction between highly sociable and indiscriminate behaviors, which can also be seen in typically developing children, is highly dependent on the degree to which the child violates accepted norms for social boundaries and the degree of functional impairment associated with the disorder. DSED-like indiscriminate behavior may be increased in children who have experienced extremes of non-optimal care (i.e., maltreatment, institutionalization). Furthermore, symptoms have been identified as increasing post-adoption.[5] However, through clinical practice it has become apparent that there is a cohort of children who do not receive a full diagnosis of either RAD or DSED but do display some of the characteristic symptoms which may leave them open to continued risk for adverse experiences.

This is particularly concerning given that the nature of the symptoms of these attachment disorders place children, even those who do not meet the full criteria for diagnosis, at heightened risk for experiencing unregulated stress. While it is clear that unaddressed RAD and DSED symptoms are detrimental to a child's development there is not a utilized screening tool to aid in identifying which children are at the greatest risk for ongoing disturbances in development. If children do not meet the full criteria for RAD or DSED they may not receive further services leaving them more vulnerable to disturbances in development. Providing clinicians with a usable screening tool could aid in providing care to this vulnerable subset of the population.

Methods

This descriptive study involved caregivers and their adopted children, under the age of 7 years old, referred by pediatricians to an outpatient clinic, which specializes in early mental health. The prevalence of toxic stress, measured as symptoms of RAD and DSED, was explored using clinical data collected during initial assessment. A full psychiatric interview, full review of history, structured clinical observations, and the Disturbance of Attachment Interview[6] were completed. All children who came to the clinic were including in this sample population. For the purpose of this study only the attachment interview and review of history will be discussed. These measures were conducted to understand the children's emotional and behavioral functioning, adaptive skills, and caregiver-child interaction at time of their visits in the clinic. The instrument, the Disturbances of Attachment Interview, which was applied by Zeanah et al.[1] and colleagues for diagnosing children with RAD and DSED, was utilized in this study in combination with other tools of observation, research, and examination of medical and social histories of children.[1] Though this clinic specializes in early mental health, such as birth to three years, children over three are also seen and evaluated at this. This is because some disorders are more prevalent and identifiable between ages zero and three, but many children require further services beyond this age range and this early mental health clinic aims to offer continuity in care. Caregivers were first informed that the assessments would be used for research and clinical purposes, as well as to help tailor interventions to the adopted child's needs and caregiver's concerns. Subsequently, all caregivers signed consent forms allowing their clinical data to be used for research purposes.

Assessments

The assessments administered included a comprehensive interview, of which the Disturbance of Attachment Interview (DAI) was part, with the caregiver, aimed at learning about the following: the child's development, history of the child's trauma-related symptoms (i.e. disturbances and losses), and the effects of these symptoms on the child's daily functioning. This interview was administered to better understand and observe the child's attachment behaviors, wariness about strangers, and ability to seek their caregiver for protection, nurturance, and support during the assessment sessions. The caregiver-child attachment relationship was observed using the Strange Situation Task procedure. The adopted children participated in various activities including free play, problem-solving, attention span retention, as well as a separation and reunion from caregiver.[1] Caregivers were administered the DAI, a tool designed to gather information from the caregiver regarding the child.[6] The DAI is a semi-structured interview that was created to navigate the presence of symptoms indicating disturbance or disordered attachment. The DAI has 4 subscales: non-attachment or inhibited (items 1-5), non-attachment/disinhibited (items 1, 6-8), indiscriminate behavior (items 6-8) and secure base distortions (items 9-12). These subscales aim to measure symptoms for RAD and DSED.

The first five items of the interview are used to assess signs of emotionally withdrawn/ inhibited attachment disturbance related to RAD, yielding total scores ranging from 0 to 10. These items concern whether the child differentiates among adults, seeks comfort preferentially from a preferred caregiver, responds to comfort from caregivers when hurt, frightened, or distressed, responds reciprocally with familiar caregivers, and regulates emotions well with ample positive and developmentally expected levels of irritability and/ or sadness.[7] The next three items address signs of indiscriminate behavior related to DSED, yielding total scores ranging from 0 to 6. These items concern whether the child checks with the caregiver in unfamiliar settings or tends to wander off without purpose, whether the child shows initial reticence around strangers or readily approaches unfamiliar individuals, and whether the child readily goes off with an unfamiliar adult. These items are scored on a Likert scale of 0 to 2; where an item is assigned a 0 if the symptom is not present, 1 if the symptom is somewhat evident, and 2 if the symptom is present, these numbers are added together for a score on each subscale. Caregivers were given the results from the evaluations, which were then discussed at a following appointment.

Results

Our sample included 114 children ranging in age of adoption from birth to 6.13 years (M=28.60 months, SD=17.82 months; 50F). By the time these children were seen at the clinic, they ranged from 11.17 months to 6.51 years of age (M=45.85 months, SD=17.46 months). Early social history and risk factors are outlined in Table 1. Although only 0.88% (N=1) of the children were diagnosed with RAD, 26.21% of these participants struggled with differentiating among parents, 64.08% were not consistently seeking comfort from their parents, and 45.63% were not consistently responding to comfort from parents (Table 2). Similarly, although only 7.89% (N=9) met the full criteria for the DSED, 63.37% continued to have difficulties consistently checking in with parents in new settings, 55.45% responded to overly friendly strangers, and approximately 21.00% left with a stranger. Therefore, despite the low proportion of internationally adopted children that meet the clinical threshold for a diagnosis in RAD or DSED, a relatively significant number of these youth demonstrated related symptoms in a subclinical level, suggesting that early clinical assessment and intervention among caregivers and children is warranted. Of the caregivers in this study, 50.00% reported concerns of anxiety in their children, 40.24% had concerns regarding physical aggression, and 8.53% had concerns of depression. At the conclusion of the consultation with the mental health provider, it was determined that 7.00% of the children included in the study met the diagnostic requirements for an anxiety disorder, 61.40% met diagnostic requirements for an adjustment disorder with emotional disturbance or anxiety, and 1.75% met the diagnostic requirements for Post-Traumatic Stress Disorder. None of the participants met the diagnosis for a depressive disorder. All children met the diagnostic criteria for Other Trauma, Stress and Deprivation Disorder of Early Infancy.

Table 1 Patients' developmental and early social history

	Mean (SD)
Months with biological parents	4.79 (9.40)
Months in institution	14.12 (15.74)
Months in a hospital	0.77 (2.33)
Months in a foster care	8.15 (11.74)
Number of transitions prior to adoption	2.26 (1.55)
	% of Patients
Pre-birth exposure to substances/ alcohol	22.81%
Sexual Abuse	1.75%
Birth mother reported malnourishment during pregnancy	6.14%
Premature birth	8.77%
	% of Patients Reporting Moderate to Severe
Physical Abuse	12.28%
Neglect of social needs	38.60%
Neglect of physical needs	33.33%

Associations between RAD and DSED symptomatology, parent-reported concerns, and clinical diagnosis

As noted above, RAD and DSED total symptomatology was obtained by sum of scores for the RAD domain. For example, the sum of ratings for items: "Child differentiates between adults," "Child actively seeks comfort from caregivers," and "Child responds to comfort from his or her parents" was obtained to yield the RAD Symptom Composite. Likewise, the sum of scores for items: "Child check with parents in unfamiliar places," "Child is not overly friendly with new people", and "Child would go off with a stranger" yields the DSED Symptom Composite. As shown in Table 3, point-biserial correlational analyses indicated that DSED symptomatology was significantly associated with parent-reported concerns of physical aggression (r=0.31, p=0.007). Increased RAD symptomatology was found to be associated with the clinical diagnosis of an adjustment disorder (r=0.17, p=0.09). While greater DSED symptomatology was also linked to the clinical diagnosis of anxiety in the opposing direction (r=-0.19, p=0.06), these associations were of marginal significance. No other associations were found. DSED symptomatology was strongly associated with parent-report concerns of their children's physical aggression beyond adoptive and demographic factors and contributed to an additional 15% of variance in the regression model. A positive association was also observed between the time passed between age of adoption and the first clinic visit as well as parent-reported concerns of physical aggression. This suggests that the longer children waited to visit a mental health clinician, the greater aggressive behaviors the parents reported.

Table 2 Percentage of symptom endorsement for reactive attachment disorder or disinhibited social engagement disorder

	0 = Clearly Present	**1= Sometimes Present**	**2= Rarely/Minimally Present**
RAD Symptoms			
Differentiates among adults	73.79% (N=76)	24.27% (N=25)	1.94% (N=2)
Seeks comfort from parents	35.92% (N=37)	48.54% (N=50)	15.53% (N=16)
Responds to comfort from parents	54.37% (N=56)	38.83% (N=40)	6.80% (N=7)
Consistently shares experiences with parents	62.14% (N=64)	30.10% (N=31)	7.77% (N=8)
Is able to control emotions and frustrations	13.86% (N=14)	30.69% (N=31)	55.44% (N=56)
DSED Symptoms			
Check with parents in unfamiliar places	36.63% (N=37)	42.57% (N=43)	20.79% (N=21)
Child is not overly friendly with new people	44.55% (N=45)	40.59% (N=41)	14.85% (N=15)
Child would go off with a stranger	32.00% (N=32)	47.00% (N=47)	21.00% (N=21)

Table 3 Associations between RAD and DSED symptomatology, parent-reported concerns, and mental health diagnosis

	Concerns of Depression	**Concerns of Anxiety**	**Concerns of Physical Aggression**	**Adjustment Disorder Diagnosis**	**Anxiety Disorder Diagnosis**	**PTSD Diagnosis**
RAD Symptoms	-0.04	-0.05	0.08	0.17+	-0.15*	-0.01
DSED Symptoms	-0.04	-0.1	0.31**	0.06	-0.19+	-0.03

+$p<0.10$ *$p<0.05$ **$p<0.001$

Note. RAD and DSED symptomatology was obtain by composite scores for these respective domains scored from the Parent-Child Attachment Interview.

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Discussion

The early social experiences of adopted children place them at high risk for developing attachment disorders. Children who have non-optimal attachment relationships due to maltreatment, neglect, or trauma during early development are predisposed to developing emotional problems of attachment that can manifest as RAD or DSED.[8] The risk of emotional and behavioral problems for a child, due to the absence of a primary caregiver early on in their development can also lead to failure to form permanent relationships. The presence of endorsed symptoms for attachment disorders without a full diagnosis of RAD or DSED supports the hypothesis that even if children do not meet the full criteria for a RAD or DSED diagnosis from the categories on the Disturbances of Attachment Interview, they are still demonstrating signs of emotionally withdrawn/inhibited attachment disturbance related to RAD or signs of disinhibited attachment/indiscriminate behavior related to DSED. Our results of small number of children in our high risk sample that met the full RAD or DSED diagnosis are consistent with previous findings. New the Diagnostic system 0 to 5 (citation) identified these children under Other Stress, Trauma, Deprivation Disorder. Difficulties in signaling emotional needs are understood to be a consequence of accumulated toxic stress, resulting from the exposure to multiple risk factors inherent in the adoption population. Even if children do not receive the full diagnosis of RAD they continue to be at risk of experiencing toxic stress, which leaves risk for negative outcomes, even after buffering relationships become available, post-adoption.[9] Stress related chronic diseases are particularly noted among children who are orphaned, abandoned, or experienced early deprivation in social institutional environments leading to increased risk to psychopathology.[8] Our findings are indicating that timing of intervention matter. Overall, a positive association was observed between the time passed between age of adoption and the first clinic visit and parental reports of physical aggression suggesting that delayed clinical intervention results in higher reports of physical aggression in children regardless of diagnoses. In brief, the longer symptoms of attachment disorders and physical features of aggression continue untreated, the more severe the symptoms become. It is important to note that parental challenges play a role in the appearance and expression of symptoms just as a child's own experience and trauma does. Family units who are seen earlier on in their transition post-adoption are provided the tools needed to address toxic stress, which could aid in improving the children's ability to form healthy, attached relationships with their adoptive parents. These children's likeliness to show symptoms of physical aggression may also be diminished as they could learn the skills needed to address their distress in healthier or more constructive ways, such as using their parent as a support system rather than externalizing their frustration and pain with violence. Notably, Dozier et al.[10] found that even infants who experiences serious neglect could form secure attachments to their new caregivers. More recently it was noted this was more likely to occur if adopted parents were organized and provided secure responses to their child's distress. For children 12 years or older that the timing of placement had no effect on signs of RAD, but earlier placement was modestly related to signs of DSED and there was a significant positive association between time spent institutionalized and inhibited social behavior in Dozier et al.'s[10] work. Steele et al.[11] showed that 4- to 7-year-old children who experienced disorganized attachments and multiple transitions could become securely attached if their new caregivers had the skills to provide opportunities to establish a secure attachment relationship. These studies highlight the importance of adoptive parents and children seeking consultation and support from mental health specialists soon after placement to begin building tools to support a healthy caregiver-child relationship. It is worth noting however, that recently adopted children may be a low risk sample given that many of them are going through mental health screening programs and interventions due to their recent placement and transitions. Nonetheless, parent-child interventions with a mental health professional would help caregivers learn to better identify needs of their children despite conflicting signals they may provide, which subsequently fosters a stronger attachment relationship. Placement in a family environment plays a positive role in the resolution of RAD. However, children who show symptoms at the time of placement may need further services. These services should focus on promoting optimal child-caregiver relationships. For example, two intervention programs labeled Attachment Bio-Behavioral Catch Up and Child-Parent Psychotherapy are aimed at strengthening child-caregiver relationships as a mode of combating early adversity. DSED does not follow the same trajectory as RAD[12] in terms of length of expression as exemplified by the fact that symptoms associated with DSED continue to be present long term post-placement. A study which looked at internationally adopted children showed an increase in symptoms related to DSED post placement.[5] There are currently no evidence-based programs aimed at the treatment of DSED. Nonetheless, parental sensitivity pays a positive role in predicting the severity and length of the expression of this condition.[9,13–15]

Conclusion

Children who do not meet the full criteria of RAD or DSED may still be at high risk for toxic stress and difficulties with understanding of social boundaries, as demonstrated by impairments in a child's ability to effectively use an available caregiver as a buffer following permanent placement in our current sample. These findings emphasize the need for effective mental health screenings and early interventions for adopted children and their families. Based on this review of clinical data it is suggested there may be merit in using the DAI as a clinical screening tool to identify high risk children and their families. There is growing evidence about effective attachment interventions that emphasize enhancing caregiver's ability to enhance their child's emotional development while they are still young and caregiver's ability to provide the necessary security to respond to their children's complex needs. Addressing these outcomes and providing intervention is only possible if children are referred to a well-equipped mental health clinician. It is necessary that children with a history of institutionalization or any high-risk social history exposures be referred to a mental health clinician by their pediatrician close to the date of their adoption to ensure more effective intervention.

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Conflict of interests

The authors have no conflicts of interest to declare.

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