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# Attachment disorders diagnosed by community practitioners: a replication and extension

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**Background:** While considered a rare diagnosis, reactive attachment disorder (RAD) is simultaneously the subject of considerable debate. A recent report suggested that RAD is overdiagnosed in community settings and that conduct problems may be used to make a diagnosis of RAD (Woolgar & Baldock, *Child and Adolescent Mental Health*, 20, 2015, 34–40). This study seeks to replicate and extend these findings. **Method:** Clinical assessment data from 100 consecutive admissions of maltreated foster and adopted children (ages 3–17) to a specialty treatment clinic in the United States were reviewed. Measures included semi-structured interviews of RAD and disinhibited social engagement disorder (DSED) symptoms and caregiver-report questionnaires of emotional problems, conduct problems, and the quality of the parent–child relationship. **Results:** Of the 100 cases reviewed, 39 presented with a diagnostic history of RAD, DSED, or ‘attachment disorder’. Of these cases, three were diagnosed in-clinic with DSED; no cases met diagnostic criteria for RAD according to DSM-5 criteria. However, analyses found that those diagnosed with RAD by community-based clinicians were significantly more likely to display conduct problems and to be adopted (as opposed to in foster care). **Conclusions:** These findings confirm those of Woolgar and Baldock (*Child and Adolescent Mental Health*, 20, 2015, 34–40). It appears that the diagnostic criteria of RAD are commonly being inaccurately applied in general community-based practice. Clarification of diagnostic criteria for RAD in recent revisions of diagnostic taxonomies, the accumulation of empirical data on RAD, and improved instrumentation are either poorly disseminated or inadequately implemented in community-based practice settings.

## Key Practitioner Message

- Reactive attachment disorder (RAD) is considered a rare diagnosis, and the diagnostic criteria have undergone significant revisions in recent years with the release of the DSM-5 and ICD-11.
- Previous research and anecdotal reports suggest that RAD may be overdiagnosed in community practice settings and that conduct problems may be commonly, and incorrectly, considered as primary symptoms of the condition.
- Specialized in-clinic assessment only rarely concurred with community-based RAD diagnosis. Community mental health services showed strong overdiagnosis of RAD and underdiagnosis of disinhibited social engagement disorder (DSED).
- Maltreated children with conduct problems and those who were adopted (as opposed to in foster care) were most likely to have been diagnosed with RAD in the community.
- Efforts to improve the clarity of the diagnostic criteria for RAD, the increased empirical data on the condition, and improved instrumentation have either not been adequately disseminated to community practice settings or are poorly implemented.

**Keywords:** Reactive attachment disorder; disinhibited social engagement disorder; attachment; clinical decision-making; parent–child relationship

## Introduction

Although epidemiological data are not available, reactive attachment disorder (RAD) is believed to be an exceptionally rare condition that occurs only after exposure to extreme insufficient care within the first years of life (American Psychiatric Association, 2013). Nonetheless, RAD is the subject of considerable debate among researchers and clinicians. In the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), RAD

was defined as a disorder of social relatedness with two potential subtypes. The first subtype, inhibited, described a persistent failure to initiate social interactions or engage with others during social interactions. The core feature of the second subtype, known as disinhibited, was ‘indiscriminate sociability’, or interacting with unfamiliar adults in a manner that lacks developmentally appropriate reticence. Further, the DSM-IV required that the symptoms observed were believed to be the direct result of persistent disregard for the child’s

physical or emotional needs or repeated changes in primary caregiver within the first 5 years of life (i.e., pathogenic care).

The RAD criteria in the DSM-IV conflated attachment behavior (i.e., seeking proximity to a caregiver when distressed) with social behavior, a problem repeatedly emphasized in the academic literature (e.g., Green, 2003; Richters & Volkmar, 1994; Zeanah & Boris, 2000). In addition, research with children adopted from Romanian orphanages demonstrated that disinhibited social behavior was not synonymous with problematic attachment behavior and could co-occur with normative attachment behavior (Chisholm, 1998; Rutter et al., 2007). To address these concerns, the diagnostic criteria for RAD were changed with the release of the DSM-5 (American Psychiatric Association, 2013). The primary feature of RAD now is a lack of seeking out or responding to comfort from an adult when distressed. Indiscriminate friendliness is no longer considered part of the RAD diagnosis, but is described as disinhibited social engagement disorder (DSED), allowing the problematic behavior in this condition to be considered as distinct from a child's attachment behavior. The pathogenic care criterion was changed to 'extremes of insufficient care' to emphasize that severe neglect and/or unstable living arrangements are the primary etiological factor. For a history of the RAD diagnosis, see Allen (2016).

Empirical research on the RAD and DSED diagnoses provides a number of clinically important findings. First, among young children living in orphanages with extremely inadequate tending to their attachment needs, RAD is rare (5%) and DSED is observed in a minority of cases (32%; Gleason et al., 2011). Second, RAD has been found to dissipate following placement in a stable and responsive caregiving environment (Jonkman et al., 2014; Smyke et al., 2012). In fact, to date, none of the studies of children adopted from Romanian orphanages have documented a diagnostic case of RAD after a period of time living in an adoptive home (Zeanah & Gleason, 2015). However, some cases of persistent observer-rated and caregiver-reported RAD behavior in nonpermanent foster care have been reported (Bruce et al., 2019; Jonkman et al., 2014). Third, the indiscriminate sociability of DSED may persist even after the child is placed in a stable and responsive caregiving environment (Chisholm, 1998; Rutter et al., 2007). In summary, RAD is a rare condition that often resolves after a period of time in a suitable caregiving environment; DSED may persist after appropriate placement, but attachment processes may not be a proximal etiological factor.

Unfortunately, delineation of more precise diagnostic criteria, development of more reliable instrumentation, publication of clear diagnostic guidelines, and generally more insight regarding the clinical phenomenology of RAD and DSED may not yet be disseminated and implemented broadly in community clinical practice. Woolgar and Baldock (2015) reviewed 100 consecutive referrals to a foster and adoption mental health service and found that 31 of the cases were described as having an attachment disorder or attachment problem by the referring caseworker/clinician. Upon assessment at the specialty service using recognized DSM-IV/ICD-10 criteria and conforming to recommended diagnostic practices, only three of these cases were diagnosed with

RAD or DSED. However, 18 of these cases were diagnosed with conduct disorder, a condition that was only suggested by the referring professional in one of the 31 cases.

The findings from Woolgar and Baldock (2015) are surprising, particularly the prevalence of conduct disorder among children diagnosed with RAD by community practitioners. Neither the previous nor current diagnostic criteria for RAD emphasize conduct problems or suggest that significant externalizing problems are a commonly co-occurring condition. In fact, data from prospective studies suggest that RAD is more closely associated with internalizing symptoms, although DSED is moderately associated with externalizing symptoms (see Zeanah & Gleason, 2015, for a review). Given that DSED is no longer a form of RAD, a conceptualization viewing externalizing problems as a component of RAD is even further from diagnostic accuracy. From a developmental perspective, potentially problematic attachment experiences early in life (e.g., disorganized attachment) are only moderately predictive of later externalizing problems (Fearon, Bakermans-Kranenburg, van IJzendoorn, Lapsley, & Roisman, 2010; O'Connor, Bredenkamp, Rutter, & the English and Romanian Adoptees Study Team, 1999), likely because of the multitude of mediating and moderating factors as well as other influences on outcomes. As such, from both the clinical and developmental fields, contemporary research does not support a simple bivariate connection between RAD or attachment problems, broadly conceived, and significant externalizing problems.

There are multiple likely reasons for the discrepancy between the defined diagnostic criteria of RAD and how the diagnosis is made in general community practice. First, Allen (2016) and Woolgar and Scott (2014) provided vignettes of interactions with community professionals where the rationale for the diagnosis of attachment problems focused on the maltreatment history of the child as opposed to the presenting symptoms. It is possible that the pathogenic care criterion, itself a unique etiological feature in the DSM criteria of RAD, may inadvertently have become included in the diagnostic heuristics of many clinicians in community settings. Second, multiple authors have published volumes discussing clinical presentations, often including significant conduct problems and/or callous/unemotional traits, that they describe as attachment problems or disorders (e.g., Hughes, 1997; Randolph, 2000; Thomas, 2005). These authors often provide checklists to assess these purported conditions and promote various treatment approaches. Such materials are also amply available on the internet. Lastly, some published papers in academic journals have likewise used a conduct disorder conceptualization of RAD or attachment problems and interpreted results in such a way to suggest that severe behavioral problems are a core feature of RAD (e.g., Hall & Geher, 2003; Vasquez & Miller, 2018). Similarly, treatment studies have used this conceptualization, assessed change in severe externalizing problems, and claimed to demonstrate effective treatment for RAD or attachment problems (e.g., Becker-Weidman, 2006; Wimmer, Vonk, & Bordnick, 2009).

Thus, there appears to be significant incongruity between the practice of diagnosing RAD as it occurs in the community and the evolving diagnostic criteria

based on the slow accumulation of empirical data. One possibility for this incongruity is a misunderstanding of the diagnostic criteria by many practicing clinicians. Given the rarity of cases that meet diagnostic criteria as defined in the recognized nomenclatures, most clinicians encounter few, if any, cases of RAD in their training and may turn to popular misconceptions of the diagnosis propagated in the past by colleagues and mentors. Alternatively, some may view the term 'reactive' to imply that the condition is responsive to the environmental circumstances of the time and serve more as an indictment of the child's setting rather than observable behavior. More deliberately, some may use the RAD diagnosis to identify any number of problematic emotions or behaviors that they believe are 'reactive' to a history of substandard or absent attachment histories. Such an approach emphasizes the insufficient care criterion and theoretical postulations over the specific behavioral indicators of the condition. Given the extant research on this issue and the differing perspectives that are present, it seems prudent to further examine factors related to the practice of diagnosing RAD in community practice.

The current study is a replication and extension of the Woolgar and Baldock (2015) study that identified significant overdiagnosis of RAD by community professionals. Such a replication is indicated for multiple purposes. First, the Woolgar and Baldock study was conducted in the United Kingdom and it is unclear if these results generalize to other countries with different models of training and service delivery. Second, Woolgar and Baldock used diagnoses assigned in their clinic as the criterion measure against which community-based diagnoses were compared. It may be argued that differences in clinical perspective and decision-making were a primary factor in the differences of opinion and not deviations from criteria and diagnostic decision rules per se. Lastly, the Woolgar and Baldock study examined few potentially explanatory variables as it was primarily a descriptive study examining the congruence of diagnoses made in-clinic with those made in the community. However, it was noted that referrals made by child and adolescent psychiatrists were more likely to include a RAD diagnosis than were referrals from pediatricians, general physicians, and caseworkers, and greater agreement was noted between community and in-clinic diagnoses for younger children (mean age for agreement = 5.3 years; mean age for disagreement = 9.0 years). The symptom/diagnostic complexity of a case was not related to diagnosis. Multiple factors remain unexamined for their potential in explaining the discrepancy between community-based and specialized in-clinic diagnosis of RAD.

One important factor to examine in this issue is the quality of the parent-child relationship. While the parent-child relationship is widely acknowledged as relevant for children's mental health, due to the impact of attachment theoretical research, relationship assessment is time-consuming and requires expertise that is rarely available in community settings. When diagnosticians in these settings perceive parent-child relationship strains, they may co-opt the RAD diagnosis for including parent-child relationship problems in their case formulation. Recognizing factors associated with diagnostic discrepancies may help to identify and address the problems with which community mental health practice is

grappling. The current study is exploratory in nature and attempts to discern the conditions under which community-based mental health clinicians diagnose RAD, and to identify factors most strongly associated with the diagnosis being made in community practice. The current study examines data from the United States and used caregiver-reported questionnaires and interview measures as part of a specialized diagnostic assessment for foster and adopted children previously seen in community mental health settings. In addition, this study reviewed data collected entirely after release and initiation of the DSM-5 criteria.

## Method

### Participants

Case files encompassing years 2015–2018 were reviewed from a hospital-based mental health clinic in the United States exclusively serving maltreated children, including those in foster or adoptive care. The most recent 100 consecutive files of children residing in either foster or adoptive care, and meeting additional inclusion/exclusion criteria, were extracted. Children were required to be residing in either foster or adoptive care as mediated by Child Protective Services to insure a previous experience of maltreatment and changes in attachment figures. Children were excluded if the foster or adoptive caregiver was a kin placement, because kin may already have forged attachment relationships before placement. Participants were eligible for inclusion if they were between the ages of 3 and 17 and had a prior history of mental health treatment. Children with a diagnosis of autism spectrum disorder or other significant developmental delay are typically referred to other specialized services and were not included in this sample. The 100 children were, on average, 9.5 years of age ( $SD = 3.9$ ) and diverse in terms of gender ( $n$  female = 52), ethnicity ( $n$  White/European descent = 46), and caregiver relationship ( $n$  foster parent = 60;  $n$  adoptive parent = 40). Caregivers presenting for the assessment were predominantly female ( $n = 83$ ). The conduct of this study was approved by an applicable institutional review board.

### Procedure

Upon presentation to the specialty clinic, children and caregivers participated in a standardized assessment protocol. A central piece of the assessment involved an interview with caregivers where clinicians collected a detailed history, enquired about previous treatment and diagnoses, and established the presence of various emotional and behavioral symptoms. Following the interview, caregivers completed several assessment measures. This information was entered into children's electronic medical record, which often included medical and mental health records that were collected through children's other contacts with the hospital or the larger affiliated health system. In addition, any records provided during the assessment were entered into children's charts. The treatment team of the clinic met on a weekly basis to discuss all new assessments occurring in the preceding week and to collectively assign diagnoses and determine treatment recommendations. The treatment team included two doctoral-level psychologists and six Master's-level clinicians (five clinical social workers and one professional counselor). The clinic's composition of mental health professionals reflects the larger state of mental healthcare practice within the United States, including in the region where data collection occurred. However, clinicians working in the specialty clinic likely were more thoroughly trained and experienced in issues related to child abuse and development than their counterparts in community-based practice owing to training requirements and clientele specific to the specialty clinic.

### Measures

**Community-based RAD diagnosis.** Whether children were previously diagnosed with RAD, DSED, or 'attachment disorder'

was established through multiple sources, including caregivers' report during the assessment interview, records provided by caregivers at the assessment, and other records available in the charts. Any mention of one of these diagnoses in the sources resulted in a designation of 'present'; no such mention was considered 'absent'.

**In-clinic RAD diagnosis.** During the initial assessment, the assessing clinicians implemented a semi-structured interview assessing RAD symptoms. The structure of the interview was based on the Disturbances of Attachment Interview (DAI; Smyke & Zeanah, 1999) where the clinician asked a specified base question and the caregiver was instructed to give examples of each affirmative response. The individual items were the behavioral symptoms of RAD as found in the DSM-5 (Criteria A.1., A.2., B.1., B.2., B.3.) presented in the form of a question. To simplify scoring for clinicians, each item was considered either present or absent based on the evidence provided (i.e., examples) in a manner similar to that used on the Indiscriminate Friendliness Interview (IFI; Chisholm, 1998). This manner of administration was chosen as the IFI formed the basis for the assessment of DSED symptoms (see below), and administering the DAI in its entirety was not practical given time constraints. Clinicians were trained and supervised in the assessment of maltreated children by the first author, including understanding and recognizing attachment behavior and indiscriminate social behavior. A structured observation of attachment behavior was not practical as much of the sample was of school-age or adolescents; relatively little research has defined the phenomenology of attachment behavior with these ages and no observational paradigms are available for ethically eliciting attachment behavior in controlled settings with these ages. Collected assessment data were discussed with the larger treatment team, and final diagnoses were assigned in accordance with DSM-5 criteria.

**In-clinic DSED diagnosis.** Similar to the RAD assessment, DSED was examined at the initial assessment using a semi-structured interview. In this case, the IFI was administered without modification and each symptom was defined as absent or present based on the evidence provided by caregivers. Observations made by clinicians during the course of the assessment were factored in as potential evidence for the symptoms (e.g., the child hugging the clinician upon first meeting). The IFI is widely used in research examining indiscriminate friendliness, and the five items collectively assess each of the four behavioral symptoms of DSED defined in the DSM-5. Assessment data were reviewed with the treatment team, and final diagnoses were made using the DSM-5 criteria.

**Trauma history.** The assessment interview included a thorough trauma and maltreatment history screen (Lang & Franks, 2007) to determine whether children ever experienced various events, including sexual and physical abuse, neglect, animal attack, witnessing domestic violence, and natural disasters, among others. The screen asks about children's experiences with 19 separate types of events, and each item was answered with a 'yes' or 'no' response. The number of types experienced was summed to examine the complexity of the child's trauma history, and the singular item of neglect (i.e., 'The child had a time in his or her life when s/he did not have the right care (e.g., food, clothing, a place to live)') was examined given the hypothesized central role of severe deprivation in the etiology of RAD and DSED.

**Emotional and conduct problems.** Caregivers completed selected scales of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ is a widely used broadband measure of child and adolescent emotional and behavioral symptomatology and has been successfully used in research with maltreated and foster care populations (Goemans, van Geel, & Vedder, 2016; Quiroga, Hamilton-Giachritsis, & Fanes, 2017). The current study utilized the emotional problems and

conduct problems subscales. Internal consistency of the scales was acceptable: emotional problems (Cronbach's  $\alpha = .75$ ) and conduct problems (Cronbach's  $\alpha = .71$ ).

**Parent-child relationship.** Caregivers of children under the age of 13 completed the Parenting Stress Index-Short Form (PSI-SF; Abidin, 2012). One subscale of the PSI-SF, used for this study, assesses caregivers' perceptions of the quality of their relationship with their child (Parent-Child Dysfunctional Interaction or P-CDI). Internal consistency was acceptable (Cronbach's  $\alpha = .76$ ), and raw scores were converted to *T*-scores for use in this study. Analyses using this measure were restricted to children between the ages of 3 and 12 ( $n = 65$ ).

## Analyses

Analyses examined differences between those with and without a RAD diagnosis from a community-based clinician. Continuous variables were examined using independent samples *t*-tests, and categorical variables were tested with chi-square analyses. Given the exploratory nature of this study, the Benjamini-Hochberg procedure (B-H; Benjamini & Hochberg, 1995) was employed to reduce the likelihood of a Type I error while preserving the power to identify likely accurate findings. In this procedure, obtained *p*-values are placed in ascending order and given a rank in accordance with their position (1 for first, 2 for second, etc.). A B-H value is then calculated for each variable by dividing the *p*-value rank by the number of tests performed and then multiplying the quotient by a predetermined rate of false discovery (the expected proportion of Type I errors). All *p*-values that are smaller than the B-H value are then considered statistically significant. For this study, the false discovery rate was set at 5%.

## Results

### Community-based & in-clinic diagnoses

Of the 100 cases, 38 presented to the clinic with a diagnosis of RAD (or 'attachment disorder') as diagnosed by a community-based clinician. Only one case presented with a diagnosis of DSED, which was confirmed in-clinic. Consistent with the separation of DSED from RAD in the current nosologies, this singular case of DSED was removed from future comparisons examining those who were and were not diagnosed with RAD by a community-based clinician. After completion of the assessment process in-clinic, two of the 38 community-diagnosed cases of RAD (5.3%) were diagnosed with DSED, while none of the cases were diagnosed with RAD. However, of the 61 cases not diagnosed with RAD or DSED by a community provider, six cases (9.8%) displayed significant disinhibited social behavior and were diagnosed with DSED in-clinic.

### Correlates of community-based RAD diagnoses

Table 1 shows the differences on a number of potential correlates between those who were and were not diagnosed with RAD by a community-based clinician. No significant differences were found between the two groups on a number of demographic variables, including gender, ethnicity, and age. Also, the groups did not differ based on complexity of trauma history as indexed by the number of discrete trauma types experienced by the children nor was the presence of DSED as assessed in-clinic significantly different between the groups. Neglect history provided some noteworthy findings. Over 92% of those diagnosed with RAD by a community clinician previously experienced neglect; however, nearly 79% of those not diagnosed with RAD also experienced neglect.

**Table 1.** Differences between those with and without a community-based reactive attachment disorder (RAD) diagnosis

Variable	No RAD Diagnosis ( <i>n</i> = 61) <i>M</i> ( <i>SD</i> ): 95% CI	RAD Diagnosis ( <i>n</i> = 38) <i>M</i> ( <i>SD</i> ): 95% CI	<i>t</i>	<i>p</i>	<i>d</i>
	<i>n</i> (%)	<i>n</i> (%)			
Age	9.5 (3.8)	9.6 (4.1)	-.1	.895	
Trauma exposures (#)	6.6 (3.2): 5.8–7.4	6.1 (2.9): 5.2–7.1	.7	.461	.16
Emotional problems	3.9 (2.4): 3.3–4.5	4.1 (2.6): 3.2–5.0	-.4	.669	.08
Conduct problems	3.4 (2.2): 2.8–3.9	5.2 (2.8): 4.2–6.1	-3.6	.001	.71
Parent–child relationship <sup>a</sup>	56.0 (7.6): 53.5–58.4	61.5 (11.4): 56.8–66.2	-2.3	.022	.57
Gender (female)	33 (54.1)	18 (47.4)	.4	.515	.07
Ethnicity (White)	29 (47.5)	17 (44.7)	.1	.786	.03
Neglect history (yes)	48 (78.7)	35 (92.1)	3.1	.08	.18
Caregiver status (adoptive)	17 (27.9)	23 (60.5)	10.4	.001	.32
In-clinic DSED diagnosis (yes)	6 (9.8)	2 (5.3)	.7	.417	.08

*n* = 99 (one case of community-diagnosed disinhibited social engagement disorder (DSED) removed for analyses).

<sup>a</sup>Analysis only included children between the ages of 3 and 12 (*n* = 65; 39 not diagnosed with RAD, 25 diagnosed with RAD).

This proportional difference was not statistically significant. The rate of emotional problems did not significantly differ between the RAD diagnosis groups.

Levels of conduct problems and parent–child relationship problems were significantly higher in community-diagnosed cases of RAD. One peculiar finding was the significantly greater likelihood of children being diagnosed with RAD if they were adopted as opposed to being in foster care. Using the B-H procedure, only conduct problems and caregiver status (being adopted as opposed to in foster care) obtained *p*-values below the calculated B-H critical value, while the parent–child relationship factor was no longer considered significant (see Table 2).

**Discussion**

Despite its high prevalence (39%), a community-based diagnosis of RAD or DSED in maltreated foster or adoptive children was rarely confirmed by in-clinic, standardized diagnostic assessment, echoing a similar finding by Woolgar and Baldock (2015) in the UK. In-clinic assessment did not identify any case with RAD. Conversely, while in-clinic assessment found DSED in 9% of the children, only one of these cases had been identified with DSED by a community-based mental health

practitioner. In fact, even though the DSM-5 introduced DSED as a separate disorder from RAD in 2013, of the 100 children within this study referred from 2015 on, this singular case was the only one diagnosed with DSED by a community-based clinician. Conduct problems and adoption status (vs. foster care) were significantly associated with community-based RAD, offering potential explanations for the stark differences with in-clinic diagnoses.

Academic and professional publications attest to the practice among some clinicians of linking conduct problems in the context of maltreatment to attachment disorders (e.g., Becker-Weidman, 2006; Hall & Geher, 2003; Hughes, 1997; Randolph, 2000; Thomas, 2005; Vasquez & Miller, 2018; Wimmer et al., 2009), a link that does not reflect the clinical consensus as codified in DSM-5 and ICD-10 or ICD-11. The current study did not have access to the clinical reasoning behind the RAD diagnoses made in community care, and it is therefore unknown which diagnostic guidelines were used. However, conduct problems were elevated in children who received a community diagnosis of RAD, diagnoses that failed to be confirmed by standardized in-clinic assessment. This link between RAD and conduct problems points not merely to low reliability in applying diagnostic criteria, but also to using invalid diagnostic criteria or heuristics.

The higher prevalence of community-diagnosed RAD among adopted children as compared to children in foster care has no obvious link to clinical literature. Adoption provides, on average, higher quality of caregiving than foster care (Julian & McCann, 2011). That caregivers sought mental health care implies that, despite removal from maltreating families, children persisted in displaying emotional and behavioral problems. When placement in a radically improved caregiving environment fails to resolve children’s problems, especially if that environment is an adoptive family, it may be speculated that clinicians are led to consider whether the children themselves possess some form of deficit, possibly caused by preplacement experiences. In fact, well-known texts suggest that abuse and neglect may interfere with a child’s capacity to ‘bond’, that is to engage in activities that forge an attachment relationship with a

**Table 2.** Ranking and analysis of statistical findings

Variable	<i>p</i> -Value	Rank	B-H value
Conduct problems	.001	1	.005*
Caregiver status	.001	2	.01*
Parent–child relationship	.022	3	.015
Neglect history	.08	4	.02
In-clinic disinhibited social engagement disorder diagnosis	.417	5	.025
Trauma exposure	.461	6	.03
Gender	.515	7	.035
Emotional problems	.669	8	.04
Ethnicity	.786	9	.045
Age	.895	10	.05

\*Values considered statistically significant using the Benjamini–Hochberg procedure.

new caregiver (e.g., Perry, 1998). As such, rather than using RAD as a descriptive diagnosis, attachment disorder may be used in community clinical practice as an explanatory diagnosis. In-clinic diagnosis did not identify any case with RAD, which is consistent with the notion that RAD symptoms usually recede once children are placed in a caregiving environment of any reasonable quality and no longer exposed to extremes of inadequate care (Jonkman et al., 2014; Smyke et al., 2012). Thus, using the attachment disorder diagnosis in community practice to explain behavior problems may be misguided.

One interesting finding was that the age of the child being assessed was unrelated to whether the child presented with a diagnosis of RAD. Diagnostic criteria require that the symptomatic behaviors of RAD be present prior to the age of 5. Therefore, one may expect a greater frequency of diagnosed cases among younger children when definable attachment behavior, or lack thereof, is more readily observable and/or evidence of a disturbance is more likely to be noted in records. In this study, the age-related diagnostic criterion was adhered to in-clinic and there was no evidence that the behaviors diagnostic of RAD were presented prior to age 5 in any of the 100 cases. This may explain some of the discrepancy in diagnosis if most community-based clinicians failed to adhere to the age requirement; however, if clinicians consider conduct problems as the primary feature of RAD, then age at which a child first displays such concerns may be considered irrelevant for clinical purposes.

### Limitations

This study was based on clinical data collected in the course of providing research-informed specialist care for maltreated foster and adopted children and their caregivers. Due to differences in diagnostic instruments, procedures, and populations, the relatively low in-clinic prevalence of DSED and absence of RAD cannot be directly compared to the usually higher clinical prevalence rates of RAD or DSED (e.g., Bruce et al., 2019; Kay, Green, & Sharma, 2016; Zeanah et al., 2004) or rates of inhibited attachment behavior or disinhibited social engagement behavior (e.g., Jonkman et al., 2014; Schepers et al., 2016). For one, RAD symptoms were simply recorded as present or absent on the basis of a clinical interview, whereas in the original versions of the DAI and IFI, subclinical levels of these symptoms may also be recorded. As a result, borderline cases based on the accumulation of such subclinical manifestations might have been missed. Furthermore, the clinic assessment did not include systematic observation of children's interactions with caregivers and strangers in mildly stressful conditions (Zeanah et al., 2016). It is unlikely that this limitation explains the difference between community and in-clinic prevalence, because standardized, research-informed assessment procedures are rarely implemented in community mental health settings. However, given the low (Bruce, Tarullo, & Gunnar, 2009) to moderate (Giltaij, Sterkenburg, & Schuengel, 2017; Schepers et al., 2019) associations between interview and observation-based assessment, actual prevalence of RAD and DSED may be higher than reflected by the in-clinic results. Furthermore, only a limited number of factors potentially associated with community diagnosis could be explored, using data collected in-clinic. The

nonsignificant association between parent-child relationship problems and community RAD diagnosis may have been attenuated by changes in parenting stress since the time of the community diagnosis. One important avenue for future research would be to describe the pathways through which community mental health providers arrive so often at making a RAD diagnosis, and seldom consider DSED.

### Implications and conclusions

Clinicians working with children previously diagnosed with RAD or DSED are advised to inquire about the behaviors on which these diagnoses are based, and the context in which these behaviors were assessed. Clinics that employ research-informed diagnostic tools and procedures may disseminate their assessments to community clinicians to raise awareness of discrepant criteria and work with community practitioners to correct misguided or outdated conceptions of attachment disorder. Work on implementing evidence-based diagnostic criteria should be predicated on the availability of effective treatment options that specifically reduce the suffering and hazards for physical and mental health that accompany RAD and DSED. This implementation work may also prevent children's needs from being misconstrued and promote children receiving treatments that are suited to their needs, for example when their conduct problems would benefit from one of the many evidence-based intervention programs available.

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The authors have declared that they have no competing or potential conflicts of interest.

### Ethical information

The research in this report conforms to all applicable ethical guidelines and was approved by the Penn State College of Medicine Institutional Review Board.

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