

# Reactive Attachment Disorder and Cognitive, Affective and Behavioral Dimensions of Moral Development

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## Abstract

This study investigated the relationship between reactive attachment disorder (RAD) and the three dimensions of moral development: cognitive, affective and behavioral. Case vignettes were used to assess moral development of typical children ( $n = 35$ ), and children with a history of adoptive or foster care who did ( $n = 20$ ) and did not ( $n = 18$ ) meet the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR; APA, 2000) diagnostic criteria for RAD. Several multivariate analyses of variance (MANOVAs) were conducted with group (RAD, Non-RAD, and control) and the dimensions of moral development. Results indicated that children with RAD exhibit more concern for external punishment and find unrealistic solutions to transgressions compared to the control group. Results are explained utilizing attachment theory, children's temperament and characteristics of RAD.

## Keywords

reactive attachment disorder, moral development, case vignettes

Successful moral development is characterized by an early capacity for remorse, an understanding of right and wrong, and the ability to regulate behavior in concordance with expected standards (Perry & Bussey, 1984; Kochanska, Forman, Aksan, & Dunbar, 2005). Morality develops early in life (Lovecky, 1997) and early parent-child interactions are reported to gradually evolve and shape children's expectations about the world and relationships (Sroufe, Carlson, Levy, & Egeland, 1999; Zilberstein, 2006). Thus, researchers have studied the primary parent-child relationship in order to understand the development of socially appropriate and moral as well as inappropriate and immoral thoughts, feelings, and behaviors among children.

Moral development is essential for successful functioning and socialization, as it is the acquisition and understanding of the concepts that constitute right and wrong. Moral development also involves the ability to regulate one's own behavior to adhere to standards deemed appropriate by society. Without development of an adequate conscience children are at risk for developing problems later in life, such as antisocial behaviors, conduct problems, insecure attachment, and psychopathology (Kochanska, Forman, Aksan, & Dunbar, 2005).

Early attachments to and interactions with their caregivers introduce children to appropriate behaviors that they then internalize, which will enable them to conform to social norms. Attachment theory suggests that children who are maltreated will be less likely to form emotional attachments with their caregivers and to internalize their values. Cassidy (1994) postulated that securely attached children are more equipped to regulate negative emotions. Insecure children, who may feel rejection from their attachment figures, tend to seek parental attention through inappropriate or antisocial behavior. Renken, Egeland,

Marvinney, Mangelsdorf, and Sroufe (1989) found that male infants with histories of anxious-avoidant attachment were more aggressive than securely attached children and when the mother exhibited hostile behaviors, both boys and girls exhibited aggression. These children also did not acknowledge their mothers' return after a period of separation. Passive-withdrawn behaviors were seen in boys who had anxious-resistant attachment and these children were often difficult to console, displaying anger and crying during reunion scenarios. Children with insecure avoidant attachment showed less empathy than securely attached children (Kestenbaum, Farber, & Sroufe, 1989). Children with disorganized attachment, the 'most disturbed kind' of attachment (van Ijzendoorn, 1997) also tended to be more aggressive than children with secure attachment (Lyons-Ruth, 1996). These children exhibited contradictory behaviors, attempting to interact with the caregiver, but failed to approach the caregiver out of fear (Zilberstein, 2006). All of this research seems to support the claim that children who have not developed secure attachment relationships with their caregivers are ill equipped to handle negative emotions, exhibit a pattern of aggressive or nonempathetic behavior, and do not seek the support of and/or gain comfort from their caregivers when distressed.

In addition to the various classifications of insecure attachment, there is a diagnosis of Reactive Attachment Disorder of Infancy and Early Childhood (RAD) in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR; APA, 2000). Children with RAD have a history of gross pathogenic parental care (disregard for their physical, social, and emotional needs) and often have experienced many changes in caregivers (through loss, foster care, and multiple placements). Subsequently, these children often have a difficult

time developing appropriate attachments to their caregivers (Lyons-Ruth & Jacobvitz, 1999) and thus seem to be at a greater risk than typical children for lacking adequate conscience development.

Kochanska et al. (2005) suggested that instead of a unitary process, there are distinct pathways from which moral cognition, moral emotion, and moral conduct develop. The concept of morality is comprised of three dimensions: cognitive, affective, and behavioral. In keeping with Kochanska et al.'s concept of morality, the goal of this study was to examine moral development in an under-studied group of children – those with RAD, specifically focusing on the cognitive, emotional, and behavioral aspects of their moral development.

### COGNITION AND MORAL DEVELOPMENT

Moral cognition describes children's thought processes regarding moral dilemmas (Kochanska, Aksan, & Nichols, 2003). Moral cognition develops through interactions with parents via enjoyable or conflictual experiences. For example, Kochanska et al. (2005) found that children's enjoyment of interactions with the mother served as a mediator of conscience and fostered children's moral cognition. That is, the children responded and justified their responses to hypothetical narratives in prosocial ways (i.e., sharing). Kochanska and Murray (2000) stated that a mutually responsive orientation, which is a child's and caregiver's relationship of reciprocal cooperation, closeness, and positive affectivity, had a direct positive effect on moral cognition. In contrast, Liable and Song (2006) found that children exhibited more antisocial themes during a story telling activity when emotions and morals were not discussed and elaborated on during a reminiscing task. Thus, these researchers concluded that reciprocal language between mothers and children are imperative to the internalization process and socioemotional competence.

Parent-child conflict also facilitates emotional understanding and early conscience development (Liable & Thompson, 2000; 2002). Conflict is common between toddlers and parents (Dunn & Munn, 1985, 1987; Kuczynski, Kochanska, Radke-Yarrow, & Girnius-Brown, 1987) and facilitates learning language as well as self-regulatory behaviors. Conflict involves experiences with, observations of, and expressions of emotion as well as inappropriate behavior, rules, regulations, and morals. One specific type of conflict that is not conducive to positive moral development is maternal power assertion, described as the use of criticism, pressure, and force during disciplinary techniques. Children exhibited immature moral reasoning when mothers exhibited power assertion during discussions of past inappropriate behaviors (Kochanska et al., 2003; Walker, Hennig, & Krettenauer, 2000; Walker & Taylor, 1991). Maternal power assertion may affect how individuals interpret information. Some researchers have found that maltreated children are more likely to attribute hostile intent in ambiguous situations than nonmaltreated children (Dodge et al., 1990, 1994; Weiss et al., 1992), whereas others have found that children's evaluations

of moral transgressions did not differ based on whether or not they had been maltreated (Smetana et al., 1999a; Smetana et al., 1999b). There may be some other factors in addition to maltreatment that affect children's evaluations of moral transgressions, perhaps related to differences in the quality of attachment they experience with their caregivers.

Early experiences can influence how children think about relationships. Thus, after experiencing years of abuse and neglect, children with attachment difficulties may develop negative thoughts about how to relate to others referred to by Levy and Orlans (1998) as a negative working model. This serves as a cognitive filter that affects the way children view the world, behavior, and their moral judgments. Thus, we hypothesize that children with RAD would be more likely than nonRAD children to believe that anti-social behavior is appropriate and can be justified.

### AFFECT AND MORAL DEVELOPMENT

The affective component of moral development deals with 'moral self-evaluation' which is an important dimension of moral reasoning (Perry & Bussey, 1984). Children's cognitive perceptions of moral transgressions help shape their emotional reactions to those transgressions. Researchers have also found that children's emotional reactions to moral quandaries may depend on their early childhood experiences. For example, children are better able to understand the concepts of right and wrong as they apply to other situations if parents use 'inductive reasoning' techniques, where children are made aware of the feelings of others and the causal role they can play in producing these feelings. Inductive reasoning is associated with the capacity for guilt and the acceptance of parental values (Liable & Thompson, 2000; 2002; Perry & Bussey). Hoffman's emotion-attribution theory postulates that children experience guilt because they feel the other person's pain and feel responsible for causing the pain (Perry & Bussey). A focus on intrinsic consequences such as pain, injury, and violation of rights leads to moral development (Smetana et al., 1997). Maltreated children focus on the extrinsic consequences (e.g. avoiding punishment), which lead to arrested or slowed moral development (Smetana et al., 1999a; 1999b). If caregivers have not been likely to use inductive reasoning, such as would be the case with caregivers providing pathogenic care to children with RAD, these children would not be likely to feel guilt or empathy towards the pain of others.

According to Smetana et al. (1999a; 1999b), maltreated children were not less morally mature than maltreated children, because all children transgressed. The differences were in the judgments of emotional responses. Smetana et al. (1999b) have extensively researched affective responses to moral transgressions and have reported that maltreated children organize their affective responses differently from nonmaltreated children, appearing overly sensitive to their own emotional reactions during moral situations. In hypothetical situations where aggression was provoked,

children who were neglected responded with fear, while in hypothetical situations where psychological harm was not provoked, anger was the most common response for children who have been abused (Smetana et al., 1999a). Physically abused girls reported more happiness related to actual transgressions than did physically abused males.

Children with RAD have been observed to have a grandiose perspective of themselves (Sheperis, Renfro-Michel & Doggett, 2003). Many parents of children with RAD reported that their children lacked empathy, whereas the children themselves reported having more empathy than their parents claimed (Hall & Geher, 2003). In addition to a lack of remorse, children with RAD may lack compassion, getting enjoyment out of watching others experience physical or emotional pain. Typically children with RAD “do not care about the basic premises of right and wrong” (Sheperis et al., pg. 80). Thus, the current researchers hypothesized that children with RAD would be more likely than non-RAD children to report positive and neutral emotions associated with anti-social behaviors.

### BEHAVIOR AND MORAL DEVELOPMENT

The behavioral component of moral development is comprised of two parts: engagement in prosocial or helping behaviors and resistance to deviation or inhibition to engage in antisocial behaviors such as stealing (Koenig, Cicchetti, & Rogosch, 2004; Perry & Bussey, 2004). Moral behavior is influenced by internalization. Internalization consists of the ability to control one's own behaviors without the presence of caregivers or other external factors, such as teachers or authority figures (Kopp, 1982; Sheperis et al., 2003). Through the development of a mutually responsive orientation (reciprocal cooperation, closeness, and positive affectivity) in early relationships, children begin to internalize their parents' morals and values (Kochanska, 2002; Kochanska et al., 2005; Liable & Thompson, 2002).

Because harsh and abusive treatment by caregivers can inhibit the development of prosocial responses in children, children who are maltreated may develop immoral patterns of behavior. Maltreated children exhibited increased aggression (George & Main, 1979; Shields, Cicchetti, & Ryan, 1994; Shields & Cicchetti, 2001), were rated to have reduced empathy (George et al.; Hall & Geher, 2003; Koenig et al., 2004; Lyons-Ruth, 1996), and scored higher on measures of emotional maladjustment than nonmaltreated children (Straker & Jacobson, 1981). Crittenden and DiLalla (1988) discovered that maltreated children employed a coping strategy of ‘compulsive compliance’ in which children suppress inappropriate behavior and respond very quickly to maternal commands out of fear and/or avoidance of maltreatment. However, this is not conducive to positive moral development.

The risk of developing severe psychological difficulties increases for children who are exposed to maltreatment (Gauthier, Stollak, Messe, & Arnoff, 1996; Malinosky-Rummell & Hansen, 1993). Maltreated children had lower ratings of self-esteem, exhibited more negative views of others, expressed less concern for the feelings of others, and engaged in more antisocial

behaviors (such as rule-breaking) than their nonmaltreated peers (Kaufman & Cicchetti, 1989). Maltreated toddlers and preschoolers were more likely than nonmaltreated children to engage in activities to cause distress and to act in inappropriate, antisocial ways, while displaying little empathy (Klimes-Dougan & Kistner, 1990; Main & George, 1985).

Moral behavior may also depend on children's temperaments. Children with stable temperaments readily comply in non-fearful situations such as during periods of instructional tasks (Kochanska, 1997; Kochanska, DeVet, Goldman, Murray, & Putman, 1994; Liable, 2004). On the other hand, compliance in children with fearful temperaments occurs because these children fear that they will lose the safety and security that their primary caregivers supply (Kochanska). This fear motivates children to take on the qualities of primary caregivers to survive (Bowlby, 1969; Kochanska; Wilson, 2001).

Children with RAD have difficulties internally regulating their own behaviors and emotions (Kopp, 1982) and are considered to lack internalization. Children with RAD engage in antisocial behaviors, including aggression, violence, lying, cheating and stealing, and they are often described as being manipulative, indiscriminately friendly, and lacking a conscience (Lynam, 1996; Rosenstein & Horowitz, 1996; Sheperis et al., 2003). Children with RAD often violate moral rules (e.g., steal and cheat) and engage in socially inappropriate behaviors (Levy & Orlans, 1998; Hall & Geher, 2003; Sheperis et al.). Hall and Geher had parents and guardians of children with and without RAD complete behavior checklists in order to compile an accurate portrait of the behavioral characteristics of children with RAD. Results showed that children diagnosed with RAD were significantly more likely than typical children to have high ratings of general behavior problems, including, social problems, withdrawal, somatic complaints, anxiety/depression, thought problems, attention problems, delinquent behavior, and aggressive behavior. Since children with RAD were rated lower on empathy and higher on self-monitoring than typical children, the authors speculated that children with RAD may consciously try to present themselves to others in a more socially desirable manner than what is accurate (Hall & Geher). Thus, we hypothesized that the children with RAD would report that other children would engage in antisocial behaviors and that they themselves would be less likely to engage in such behaviors.

There is some evidence to support the use of children's responses to case vignettes as a measure of their moral development such that children would project their own thoughts, feelings and behaviors on to the vignette protagonist (Perry & Bussey, 1984). Kochanska, Padavich, and Koenig (1996) found that children who produced several antisocial themes in response to hypothetical narratives were less internalized (i.e., able to self-regulate). Internalization was measured through compliance tasks which involved the observation of children complying with a rule to not play with specified toys.

### PURPOSE

A failure of children with RAD to internalize the morals and values of their parents may be the effect of harsh and punitive disciplinary techniques combined with nonattachment, not using inductive reasoning techniques, and the lack of a mutually

responsive orientation. Using the aforementioned studies as justification for the use of case vignettes, the current study used three paragraph-length moral transgression stories to elicit responses from participants in the three groups. The hypotheses were that children with RAD were more likely than either children in the non-RAD or the control group to: (1) give responses that indicate they think anti-social behavior is appropriate and can be justified; (2) report positive or neutral emotions associated with engaging in antisocial behaviors; and (3) report that other children would engage in antisocial behaviors and that they themselves would be less likely to engage in such behaviors.

## ■ METHOD

### DESIGN

The current study utilizes a quasi-experimental research design since the diagnosis of RAD is a preexisting disorder (diagnosis group: RAD, non-RAD, control) and the independent variable cannot be randomly assigned.

### PARTICIPANTS AND SETTINGS

Participants were 73 children between the ages of five and 19 years ( $M = 10.19$ ,  $SD = 3.38$ ). Participants included 36 (49.3%) males and 37 (50.7%) females. There were 30 (41%) Caucasian, 26 (35.6%) African American, five (6.8%) Biracial, five (6.8%) Hispanic, and two (2.7%) Native American, with five (6.8%) who did not report race. We included both a control group of children as well as children who were also in the foster care system but without a RAD diagnosis to ensure that any group differences were a feature of RAD. The participants were thus separated in the three groups: RAD Group ( $n = 20$ ), non-RAD Group ( $n = 18$ ), and control group ( $n = 35$ ). Members of the RAD group had been given a diagnosis of RAD by a clinician, had a history of foster care and/or adoption, and were recruited from a private therapist or pediatrician. Recruitment for this group was through a department of social services (DSS) because the RAD population is highest among this group of children (Minnis, Everett, Pelosi, Dunn, & Knapp, 2006) as well as private therapists who specifically treat children with RAD. Members of the non-RAD group had a history of foster care and/or adoption but did not meet the diagnostic criteria for RAD. Members of the control group did not meet the diagnostic criteria for RAD and had never been in adoptive or foster care. The control group was recruited through an after-school program and family and friends of East Carolina University (ECU) faculty. Testing took place at the facilities where the children were receiving services.

### PROCEDURE

The parents/guardians of the children in the experimental groups were advised of the study and asked if they would participate by DSS representatives or private practice therapists. If the parents/guardians decided to allow their children to participate, the DSS representative or private practice therapist asked the parents/guardians to complete the consent forms and information questionnaires and their children to complete the assent forms. For children/adolescents in foster care, additional consent was obtained from a guardian appointed by DSS. The DSS representative or private practice therapist filled out the child

rating scales. This information was passed to the researchers at ECU who then set up appointments with parents and children in private offices either at DSS or ECU. The parents/guardians of the children in the control group were recruited for the study and asked if they wished to participate while at the Boys and Girls Club.

Children were administered a series of measures, including the moral vignettes, by graduate and undergraduate students who had received training. After completion of the measures, the children were thanked for their participation and compensated by receiving stickers and candy, with their parents' approval.

The researchers received approval from the ECU Institutional Review Board to conduct this study. It conformed to the APA ethical guidelines for research with human subjects, including issues of confidentiality and voluntary participation.

### MATERIALS

**Case Vignettes.** The case vignettes were a collection of three paragraph-length moral transgression stories from the perspective of a same-sex fictional character. The events in the case vignettes are situations that depicted characters acting in an inappropriate or immoral manner which children should find familiar. The story plots consisted of the protagonist: (1) stealing a book from the book fair at school; (2) hiding test materials to forgo studying; and (3) throwing away the lunch that he does not like which his mother gave him. Researchers read simple instructions regarding the process to the participants and asked if there were any questions. All vignettes were read aloud regardless of the children's reading abilities. The children were given a copy of the vignettes to help them remember the vignettes when responding to the questions. The vignettes were randomly presented to control for order effects.

The case vignette questions specifically asked about behaviors, emotions, and cognitions. The children answered questions regarding what the protagonist would do, should do, and eventually what the participants would do if they were in that situation. Questions also included those regarding the protagonists' justification for the action taken and the affect felt by protagonists during the transgression. One sample question (asking about a behavior) is, "What do you think will happen?"

### CODING AND SCORING

The responses to each question were coded categorically with 1 indicating the endorsement of a category and 0 indicating that the category was not endorsed. The mean scores for each category endorsed within the specified dimension were summed across all three vignettes and used in the analyses.

For coding and scoring the cognitive questions, five categories were established from previous work of Smetana et al. (1999b) to assess the justifications or moral cognitions of the children. These codes were four types of justification (act-oriented, punishment avoidant, undifferentiated, and justified) plus and don't know/no response. The cognitive codes had a Cronbach's alpha of 0.87.

Seven affective codes of emotions that occur during moral dilemmas were used: happy, sad, anger, fear, neutral, guilt and empathy, derived from Smetana et al. (1999b) and Kochanska et

**Table 1. MANOVA Results for the Action of the Protagonist by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
Antisocial Theme	1.55	1.28	1.56	1.15	1.63	1.24	0.04
Commitment to Concern about Good Behavior Theme	0.30 <sup>a</sup>	0.57	0.78 <sup>b</sup>	1.06	0.34 <sup>a</sup>	0.64	2.48*
Concern about Others Theme	0.60 <sup>b</sup>	0.75	0.11 <sup>a</sup>	0.47	0.43 <sup>a</sup>	0.77	2.46*
Guilt and Empathy Theme	0.00	0.00	0.00	0.00	0.00	0.00	
Confession and Reparation Theme	0.10	0.31	0.00	0.00	0.03	0.17	1.33
Concern about External Punishment	2.10 <sup>b</sup>	0.79 <sup>b</sup>	1.72 <sup>a</sup>	1.07 <sup>a</sup>	1.06 <sup>a</sup>	0.94 <sup>a</sup>	8.54***
Denial	0.00	0.00	0.00	0.00	0.00	0.00	
Avoidance	0.40 <sup>b</sup>	0.88 <sup>b</sup>	0.17 <sup>a</sup>	0.38 <sup>a</sup>	0.29 <sup>a</sup>	0.17 <sup>a</sup>	3.37**
Don't Know	0.50	0.22	0.00	0.00	0.00	0.00	1.34
Unrelated Comments	0.10	0.31	0.00	0.00	0.20	0.53	1.51

\**p* < .10. \*\**p* < .05. \*\*\**p* < .01.

al. (1996). The affect codes had a Cronbach's alpha of 0.97. For the questions addressing the children's view of parental emotional reactions to their transgression, the affective codes described by Smetana et al. were added to the Kochanska et al. parent codes. For both sets of parental reaction codes, Cronbach's alpha was 0.86.

Kochanska et al.'s (1996) procedures were followed for coding behavioral actions as well as parental discipline techniques from the children's perspectives. These codes consisted of: antisocial theme, commitment to/concern about good behavior, concern about others theme, guilt and empathy theme, confession and reparation theme, concern about external punishment, denial, avoidance, don't know and unrelated comments. In regards to the reliability of the behavior codes, Cronbach's alpha was 0.85. For a complete list of the codes used and their definitions see Smetana et al. (1999b) and Kochanska et al. Inter-observer reliability was calculated for all three coding systems. The Cronbach's alphas are stated above. Throughout the process, the coders periodically "realigned," which involves the coders reviewing the established codes. This process ensures the integrity

of the codes and prevents coder drift or reliability decay.

## ■ RESULTS

### ANALYSES PLAN

The results of this study were analyzed according to the procedures recommended by Kochanska et al. (1996). A confirmatory factor analysis on the codes was conducted to confirm that they are theoretically placed in the appropriate moral dimension. However, there was not sufficient variance among the codes to do a factor analysis, because some codes were rarely if ever used. Instead, the codes were aggregated according to the procedures outlined in Kochanska et al. Several codes were grouped together to form themes by comparing their correlations. This reduced the number of behavioral codes from 18 to 10.

The qualitative information ascertained from the case vignettes was coded quantitatively by the guidelines described above. MANOVAs were conducted to determine if the RAD diagnosis is associated with the different dimensions of moral development. In total, five MANOVAs were run for each coded

**Table 2. MANOVA Results for the Appropriate Behavior by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
Antisocial Theme	0.15	0.37	0.06	0.24	0.11	0.32	0.43
Commitment to Concern about Good Behavior Theme	2.75	0.44	2.78	0.73	2.40	0.85	2.26
Concern about Others Theme	0.45	0.99	0.28	0.75	0.63	0.94	0.90
Guilt and Empathy Theme	0.00	0.00	0.00	0.00	0.03	0.17	0.54
Confession and Reparation Theme	0.15	0.49	0.17	0.38	0.06	0.24	0.74
Concern about External Punishment	0.25	0.64	0.11	0.47	0.37	0.91	0.72
Denial	0.00	0.00	0.00	0.00	0.00	0.00	
Avoidance	0.05	0.22	0.00	0.00	0.00	0.00	1.34
Don't Know	0.00	0.00	0.00	0.00	0.03	0.17	0.54
Unrelated Comments	0.05	0.22	0.11	0.32	0.11	0.32	0.32

**Table 3. MANOVA Results for the Participants Reported Action by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
Antisocial Theme	0.40	0.75	0.39	0.61	0.14	0.43	1.73
Commitment to Concern about Good Behavior Theme	2.55	0.76	2.44	0.78	2.34	0.84	0.43
Concern about Others Theme	0.30	0.80	0.22	0.73	0.46	0.82	0.59
Guilt and Empathy Theme	0.00	0.00	0.00	0.00	0.09	0.28	1.71
Confession and Reparation Theme	0.05	0.22	0.00	0.00	0.17	0.45	1.80
Concern about External Punishment	0.40	0.82	0.11	0.47	0.34	0.84	0.78
Denial	0.00	0.00	0.00	0.00	0.00	0.00	
Avoidance	0.00	0.00	0.11	0.32	0.03	0.17	1.62
Don't Know	0.00	0.00	0.00	0.00	0.86	0.28	1.71
Unrelated Comments	0.50	0.22	0.11	0.47	0.17	0.45	0.57

dimension. The attachment category (RAD, non-RAD and control) served as the predictor variable, whereas the dimensions of moral development (moral cognition, moral affect, and moral behavior) served as the outcome variable.

**GROUP COMPARISONS**

Examinations were done to determine if children with RAD elicited more themes of antisocial behavior, justified the antisocial behaviors, and reported less negative emotions associated with committing transgressions. Seven multivariate analyses of variances (MANOVAs) were conducted, one for each set of codes, to determine if the three groups differed on the three dimensions of moral development. All means and standard deviations are found in Tables 1 through 7. Although the hypotheses were not supported, there were some unexpected significant findings.

Regarding the behavioral dimension codes, there was a main effect for avoidance (unrealistic solutions) by the protagonist,  $F(2,73) = 3.37, p < 0.05$ . Children in the RAD group ( $M = 0.40$ ) expressed more Avoidance (unrealistic solutions) than the control group ( $M = 0.29$ ) on the protagonist's response to committing a transgression. There was also a main effect for concern of external punishment by the protagonist,  $F(2,73) = 8.54, p < 0.01$ . The children in the RAD group ( $M = 2.10$ ) elicited more themes concerned with external punishment by the protagonist than the control group ( $M = 1.06$ ). Several trends did emerge for the protagonist's actions, one of them being themes of commitment to/concern about good behavior,  $F(2,73) = 2.48, p < 0.10$ . The Non-RAD group ( $M = 0.78$ ) elicited more themes of commit-

ment to/concern about good behavior than the control group ( $M = 0.34$ ). Another trend was found for concern about others,  $F(2,73) = 2.46, p < 0.10$ . Children in the RAD group ( $M = 0.60$ ) expressed more themes of concern for others than children in the Non-RAD group ( $M = 0.11$ ). There were no differences for what the participant would do in the same situation and what the appropriate response to the situation was.

For the cognitive justification themes, there was a trend for a punishment avoidance justification,  $F(2,73) = 2.76, p < 0.10$ . Children in the control group ( $M = 0.57$ ) justified transgressions of the protagonist utilizing a punishment avoidant justification more than the Non-RAD group ( $M = 0.11$ ). More children in the control group stated that transgression was wrong because of the consequences to follow compared to children in the Non-RAD group. Despite this trend, no significant differences were found for the cognitive justifications between the groups. There were also no differences found among the three groups in affective responses to the moral transgressions.

**DISCUSSION**

The present study investigated whether children with a diagnosis of RAD exhibited more negative factors on the three dimensions of moral development than children without that diagnosis.

We hypothesized that children in the RAD group would be more likely than the children in the non-RAD group and the control group to report that other children would engage in

**Table 4. MANOVA Results for the Cognitive Justification of the Protagonist by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
Act-Oriented Justification	0.35	0.59	0.78	0.81	0.49	0.82	1.57
Punishment Avoidant Justification	0.55 <sup>a</sup>	0.83 <sup>a</sup>	0.11 <sup>a</sup>	0.32 <sup>a</sup>	0.57 <sup>b</sup>	0.78 <sup>b</sup>	2.76*
Undifferentiated Justification	0.40	0.59	0.22	0.55	0.40	0.60	0.62
Justified Justification	1.70	1.13	1.50	0.99	1.29	1.13	0.94
Don't Know/ No Response	0.15	0.49	0.39	0.78	0.37	0.65	0.91

\*  $p < .10$ .

**Table 5. MANOVA Results for the Affect of the Protagonist by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
Happy	0.70	1.03	0.89	0.96	0.89	0.99	0.26
Sad	0.50	1.00	0.44	0.86	0.86	1.03	1.39
Angry	0.30	0.41	0.06	0.24	0.14	0.36	1.83
Fear	0.40	0.59	0.22	0.55	0.14	0.36	1.82
Neutral	0.20	0.52	0.33	0.77	0.06	0.24	1.93
Guilt	0.45	0.83	0.50	0.71	0.49	0.56	0.03
Empathy	0.00	0.00	0.06	0.24	0.14	0.43	1.34
Other	0.45	0.89	0.50	0.92	0.37	0.73	0.16

antisocial behaviors. Contrary to previous research (Hall & Geher, 2003; Lyons-Ruth, 1996), this hypothesis was not supported; children with RAD did not endorse themes of antisocial behavior more than the other groups. However, we did find group differences regarding the reported behavioral actions of the protagonist in the case vignettes. Children with RAD more frequently stated that the protagonist would exhibit greater concern with external punishment than the children in the control group. This is consistent with research indicating that maltreated children show concern for external consequences and try to avoid punishment (Smetana et al., 1999a; 1999b). Children who are maltreated are less likely to have parents who focus on how misbehavior hurts others and are more likely to receive severe external punishment. This combination leads to lower levels of moral development (Smetana et al., 1997) and this is likely to be the experience of both maltreated children and those with RAD. It is also possible that children with RAD mentioned themes concerned with external punishment because they have a low tolerance for rules and limits and thus attempt to manipulate authority figures to escape these limits. Sheperis et al. (2003) reported that children with RAD have a low tolerance for limits set by authority figures. The researchers went on to state that these children are “ingeniously manipulative, fooling professionals who assume that the child’s cooperative behavior is sincere, while in fact it is devious and controlling (pg. 79).” Children with RAD have also been described as lacking a conscience (Hall & Geher). Engaging in a high degree of self-monitoring would also allow for children to easily manipulate authority figures. Self-monitoring describes the ability to identify and alter one’s own behavior or responses (Hall & Geher). It is likely that children with RAD are concerned with external punishment in an attempt to avoid the situation entirely as well as the punish-

ment to follow.

We found that children with RAD expressed more avoidance (unrealistic solutions) by the protagonist than the children in the control group. The children in the RAD group consistently reported that the protagonist would ‘go to jail’ or ‘get arrested’ for engaging in overt transgressions. These unrealistic solutions suggest that children with RAD do not understand the appropriate consequences for their immoral behavior. This result can be explained by the same reasoning as above with the addition of temperament. Internalization of parental norms requires a secure attachment and thus fear that the safety the parent provides will be taken away (Kochanska, 1997; Main, 1995). Without this fear, internalization cannot take place. The fearful child exhibits worry and anxiety about punishment expectations, whereas the fearless child displays ‘insufficient arousal’ during times of consequence. Kochanska found that fearless children thrive through the use of reward and not consequences. It is likely that consequences have little effect on the actions of the fearless child, which is the opposite of the fearful child who experiences arousal during times of actual and even perceived transgressions. Children with RAD who are classified as the disinhibited type can be described as having a fearless temperament, engaging in transgressions despite the consequences (Kochanska & Thompson, 1997).

Several trends emerged in the results which coincide with the above speculation. Children in the control group were more likely than the children in the non-RAD group to report that the protagonist should not transgress due to the act being wrong because consequences will follow, or that the act violates an existing standard predetermined by authority. This pattern is further evidence that the temperament of children may affect their behaviors and responses. Children in the control group exhib-

**Table 6. MANOVA Results for the Discipline Techniques of the Protagonist Parents by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
No Involvement	0.65	1.09	0.39	0.78	0.20	0.41	2.36
Guidance/Gentle Control	0.85	1.04	0.83	1.15	0.80	0.93	0.02
Physical Interventions	1.05	1.10	1.11	1.02	0.94	1.08	0.16
Verbal Power – Assertion	1.05	1.05	1.06	1.00	1.34	1.16	0.64

**Table 7. MANOVA Results for the Emotional Reaction of the Protagonist Parents by Attachment Group**

Variable	RAD ( <i>n</i> = 20)		Non-RAD ( <i>n</i> = 18)		Control ( <i>n</i> = 35)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	
No Involvement	0.10	0.31	0.17	0.38	0.20	0.47	0.38
Guidance/Gentle Control	0.50	0.83	0.67	1.09	0.40	0.65	0.63
Physical Interventions	0.15	0.49	0.06	0.24	0.03	0.17	1.04
Verbal Power Assertion	0.25	0.55	0.17	0.38	0.42	0.78	1.13
Happy	0.05	0.22	0.17	0.38	0.06	0.24	1.12
Sad	0.40	0.68	0.28	0.67	0.40	0.60	0.25
Angry	0.95	1.05	1.17	1.10	1.00	1.06	0.22
Fear	0.10	0.31	0.06	0.24	0.06	0.24	0.21
Neutral	0.05	0.22	0.00	0.00	0.14	0.36	1.81
Guilt	0.05	0.22	0.00	0.00	0.29	0.17	0.43
Empathy	0.05	0.22	0.00	0.00	0.11	0.40	0.89
Other	0.70	0.92	0.44	0.71	0.46	0.74	0.72

ited responses that indicated that they endorse qualities of the fearful child; they reported fearing consequences and ultimately internalizing parental standards (Kochanska, 1997; Main, 1995).

The hypothesis that children in the RAD group would be more likely than either of the other two groups to indicate that antisocial behavior is appropriate was not supported by the results of this study. Perhaps children with RAD are able to identify moral transgressions and understand that antisocial behavior is followed by consequences. Smetana et al. (1999b) found no difference in the moral justifications of children who have been maltreated compared to those who have not during actual and hypothetical transgressions. The authors concluded that maltreated children were as morally mature as nonmaltreated children in that they could identify transgressions as being worthy of punishment. However, as the results of this study indicate, maltreated children with RAD may not be aware of the appropriate consequences to follow, may even expect extreme or unrealistic consequences, but may transgress anyway because of their fearless temperament.

Another possible explanation for the finding that children in the RAD group endorsed extreme unrealistic consequences is their past experiences. Children with RAD have experienced gross pathogenic parental care through persistent disregard of children's basic emotional and/or physical needs. Perhaps the actual consequences these children received were often extreme and unpredictable. Thus, these children would have learned that consequences are extreme and that they are not consistent across transgressions. However, the fact that the comparison group of children in foster/adopted care were also maltreated but did not show this trend indicates that although past experiences may impact some children, it is not the entire explanation for children with RAD's endorsement of extreme unrealistic consequences. Research is emerging that suggests that there may be a genetic predisposition that increases the vulnerability for some children growing up with extreme pathogenic care to have emotional problems and for others to be relatively unscathed (Rutter, 2006; Minnis et al., 2007).

Another trend indicated that children in the RAD group expressed more themes of concern for others than children in the Non-RAD group. However, further inspection of the data revealed that what was rated under themes of concern for others actually consisted of not only reporting the actions of the protagonist but also reporting the actions of other characters. This 'extended' reporting can be explained through the manipulative nature of children with RAD, attempting to "control the responses and behaviors of others" (Sheperis et al., 2003). The following response is an example from the case vignettes that displays this attempt: "she should talk to her grandmother so her grandmother won't be so mad and that way she won't get in as much trouble."

Still another trend was found in which children in the Non-RAD group reported more responses indicating that the protagonist would be concerned with exhibiting the appropriate moral action compared to children in the RAD group. Maybe this indicates that the children in foster care who have not been diagnosed with RAD truly are more concerned about acting morally appropriate than children who have been diagnosed with RAD. An alternate explanation is that these children who were maltreated but not diagnosed with RAD had fearful temperaments and that this fear motivated these children to be concerned about acting appropriately (Bowlby, 1969; Kochanska, 1997; Wilson, 2001). However, if this is a part of the compulsive compliance that is sometimes seen in maltreated children, it may not necessarily be indicative of positive moral development (Crittenden et al., 1989).

We hypothesized that the children in the RAD group would be less likely to report that they themselves would engage in antisocial behaviors. This hypothesis was not supported; no significant differences were found among groups for what the participants reported they would do in the same situation and what they believed was the appropriate response to the situation. That is, all three groups were able to identify what the appropriate behavior for each moral dilemma was and reported that they would engage in the appropriate behavior. This indicates either

that children with RAD are able to identify the appropriate moral action as well as the other two groups, or that children with RAD engaged in more self-monitoring than the other two groups. However, their perceptions of the consequences that follow moral transgressions differ greatly.

Interestingly, children in the control group were the only children to say that the protagonist would confess or return the stolen book. This is understandable in that children who have been grossly abused and neglected would probably not have been taught how to make amends for moral transgressions. It would be useful to investigate in future research whether perceptions of how to make amends for moral transgressions differs between children with RAD and other foster/adopted children who may also have been abused and neglected.

It was also hypothesized that children in the RAD group would be less likely than children in the other two groups to report negative emotions. However, this hypothesis was not supported. The results indicated that children in the RAD group did not differ in their reports of emotional responses from that of the Non-RAD and control groups. All three groups identified happy and sad as the two most common emotions felt by the protagonist of the case vignettes. These results are concurrent with previous literature that children as young as preschool can identify basic emotions (Denham, 1986; Denham & Couchoud, 1990; Michalson & Lewis, 1985). These results also seem to indicate that children with RAD are capable of identifying these emotions as well as the other two groups. To a lesser extent, fear, anger, and guilt of the protagonist were identified by members of all three groups. Interestingly, children in the RAD group were the only children to endorse that the protagonist would have a neutral emotion to transgressions. Smetana et al. (1999b) reported that children who have experienced maltreatment differ from those who have not in their affective organization. They found that maltreated children reported less negative emotions during hypothetical transgressions than nonmaltreated children. This would also be useful to further study with a larger participant sample to see if this is a common feature of children with RAD.

The results of the current study indicate that it is not just being adopted or placed in foster care that influences moral development, but a diagnosis of RAD; specifically, in their perceptions of behavioral consequences applied to engaging in moral transgressions. This could be due to lack of attachment and internalization, the temperament of the child, past experiences, or the specific symptomatology associated with a diagnosis of RAD.

### LIMITATIONS

This study did have several limitations, the majority of them regarding the populations from which the samples were recruited. First, the children from the control group were recruited from an afterschool program that serves a low socioeconomic population and many children who are considered at-risk for numerous social and emotional problems. These unknown psychosocial difficulties could have impacted the responses to the case vignettes and thus altered any differences between the control and experimental groups. Additionally, children were assigned to the RAD group based solely on clinical diagnosis, and thus children in the Non-RAD group, who did not see a mental

health professional, may have failed to be identified as having RAD. Therefore, it is possible that the two experimental groups were not distinctly different.

Another limitation to the study was that all the children in the RAD group were currently in treatment that involved learning coping skills for emotional deficits and appropriate behavioral responses that could have impacted their responses. Interestingly, children in the RAD group did not generate themes of antisocial behaviors, but they did endorse themes of unrealistic consequences. This may indicate that therapy was effective in remediating overt behavioral and emotional deficits, but was not effective in overcoming these children's covert deficits. An example of this covert deficit would be their unawareness of appropriate consequences for immoral behavior. Children with RAD endorsed extreme actions to be taken for minor transgressions, such as 'going to jail.'

RAD has two subtypes: inhibited and disinhibited. The subtypes classify distinct behavior patterns of children with the disorder. Children with the first subtype are characterized as exhibiting excessively inhibited attachment styles whereas children with the latter subtype exhibit indiscriminate sociability. Since both subtypes exhibit differing behaviors, perhaps their responses to the actions, feelings, and thoughts of the protagonist could have differed. However, in the recruitment of the RAD sample, a differentiation between the subtypes was not made. This mixed classification could have impacted the results of the study.

The current study relied on projective measures rather than direct observation of behavior. The participants were asked questions regarding a protagonist's actions and feelings during a moral transgression in the expectation that the children would report their own thoughts, feelings, and actions (Perry et al., 1984). Projective measures are seen as highly controversial because the evidence for their reliability and validity is weak (Gittelman-Klein, 1986; Lowenstein, 1987). Finally, the overall sample size for this study was small; with a larger sample results may have been different.

### CONCLUSIONS AND FUTURE DIRECTIONS OF STUDY

The results of the current study have shown that children with RAD are not different from typical children in their ability to identify emotional responses and appropriate moral behaviors. Where they do differ is in their view of consequences for behavioral transgressions, with the children with RAD not only being concerned with external punishment, but also finding unrealistic and extreme solutions to transgressions.

In order to investigate the overt as well as covert deficits of children with RAD, future research should focus on assessing the differences between overt moral transgressions and covert ones. It is noted that the extreme punishment responses were only endorsed on the first case vignette, which involved the most overt transgression. Responses for the third case vignette, the most covert transgression, indicated that the children with RAD had a difficult time deciphering that this was indeed immoral. Their responses tended to indicate that this act was appropriate and that they too would engage in similar behaviors.

Rather than directly observing the moral behavior of these children, the study employed case vignettes with the idea that

the children would project their own behavior into the case vignettes. The results should be interpreted with caution, however, because previous research has shown that children with RAD view themselves in a positive light that is often in direct opposition to the way they actually behave. Children with RAD have been observed to have a grandiose perspective of themselves (Sheperis et al., 2003) and, while parents reported a lack of empathy in these children, the children reported having more empathy than their parents claimed (Hall & Geher, 2003). Research should be conducted involving behavioral observations of children with and without RAD placed in a controlled environment where the children have the opportunity to engage in moral or immoral behaviors. With this, the actions of children with RAD could be measured systematically and compared to those of children without RAD.

Moral development is only one developmental area in which these children face difficulty. Research needs to continue in order to develop a comprehensive understanding of the diagnosis of RAD. The current study is not the first to examine the relationship between moral development and a diagnosis of RAD. The majority of research reviewed focused on characteristics such as lack of empathy and guilt (Hall & Geher, 2003; Sheperis et al., 2003). Other research has consisted of individual case studies, parent reports, proposed treatment, and problems with diagnosis (Bryne, 2003; Hanson & Spratt, 2000; Heller et al., 2006; Minnis et al., 2006). At this time, the current study is the first to look at all three dimensions of moral development and children with RAD as well as one of few to look at children with RAD's responses to moral transgressions.

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