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ORIGINAL PAPER

Perceived Control Mediates the Relation Between Parental Rejection and Youth Depression

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Abstract Previous research suggests that both perceived parental control and rejection may be linked to youth depression. However, research has not definitively determined which dimension matters more, nor examined mediation within a clinical sample. We used a sample of clinically referred youth (aged 7–17) to determine (a) which parenting dimension is more closely associated with youth depression, and (b) whether youngsters' perceptions of control mediated the association. Perceived parental rejection was strongly linked to depressive symptoms (perceived parental control was not); youth perceived control did in fact mediate the association, and robustly so across gender and age groups. The findings suggest a developmental process in depression, plus potential foci for prevention and treatment programs.

Keywords Perceived parental rearing behaviors · Depression symptoms · Youth depression · Perceived control

The prevalence of depression shifts throughout the life span, with lifetime estimates ranging from 10–25% (Hankin et al., 1998; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993). For children, the prevalence of major depressive disorder (MDD) is low, ranging from 1–2.5% (Fleming & Offord, 1990), but rates increase from the early teens to the mid-20s (Kessler, Avenevoli, & Merikangas, 2001), with MDD prevalence rising sharply over the course of adolescence, to 15–20% (Lewinsohn et al., 1993). In school-aged youngsters, depression undermines peer relationships and academic functioning, and generates significant family stress and use of mental health services (e.g., Angold et al., 1998; Clarke, DeBar, & Lewinsohn, 2003). Youth depression is also linked to increased risk of other psychiatric disorders (Angold & Costello, 1993) as well as drug use and suicide (Gould et al., 1998; Rohde, Lewinsohn, & Seeley, 1991), the third most common cause of death in adolescence (Arias, MacDorman, Strobino, & Guyer, 2003). Moreover, longitudinal research has shown substantial continuity of youth depression into adulthood, with impaired functioning in work, social, and family life, and markedly elevated risk of adult suicide attempts and completed suicide (see, e.g., Costello et al., 2002; Harrington, Fudge, Rutter, & Pickles, 1990; Lewinsohn, Rohde, Klein, & Seeley, 1999; Rao, Hammen, & Daley, 1999; Weissman et al., 1999). The prevalence, immediate correlates, and long-term sequelae of youth depression, underscore the need to identify risk factors that set the stage for the condition—to help identify those at greatest risk and to provide the base of information needed for effective prevention and treatment.

One place to look for such risk factors is the literature on parenting. Numerous investigators have probed the relation between parenting and youth dysfunction, including depression and other internalizing problems and disorders (Burbach & Borduin, 1986; Chorpita, 2001; Chorpita & Barlow, 1998; Craske, 1999; Gerlsma, Emmelkamp, & Arrindell, 1990; Gruner, Muris, & Merckelbach, 1999; Muris, Meesters, & Van Den Berg, 2003; Rothbaum & Weisz, 1994). Across the wide array of literature on parenting and youth psychopathology, two broad dimensions of parental behavior have attracted special interest: *rejection*

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and *control*. Rejection is defined in the literature as a cluster of parent behaviors associated with unresponsiveness to and disapproval of the child (see e.g., Clark & Ladd, 2000; Maccoby, 1992; Muris, Schmidt, Lambrichs, & Meesters, 2001). Control is defined in the literature as a cluster of parental behaviors involving excessive regulation of children's activities and routines, excessive encouragement of children's dependence on parents, instruction to children on how to think or feel, and attempts to intrude on the emotional and psychological development of the child (see e.g., Barber, 1992, 1996; Steinberg, Elmer, & Mounts, 1989). Although other forms of parental control (e.g., telling a young child when not to cross a busy street) can be beneficial, the forms studied in the literature do not seem likely to be helpful. The present study focused on children's perceptions of the degree to which their parents manifest control and rejection as defined here.

Across a large number of studies employing adults' retrospective reports of their parents' behavior, evidence can be found to support both rejection and control as correlates of *later* depression. The evidence can be found in studies of clinical samples (Bifulco, Brown, & Harris, 1987; Crook, Raskin, & Eliot, 1981; Gaszner, Perris, Eisemann, & Perris, 1988; Jacobson, Fasman, & DiMascio, 1975; Parker, 1979; Plantes, Prusoff, Brennan, & Parker, 1988; Raskin, Boothe, Reatig, Schulterbrandt, & Odle, 1971) and nonclinical samples (e.g., Johnson, Petzel, Dupont, & Romano, 1982; Winefield, Goldney, Tiggemann, & Winefield, 1989).

Because so much of the evidence supporting both parenting dimensions rests on retrospective reports of adults, it is fair to ask whether a different picture might emerge in tests of *concurrent* associations between parenting and *youth* depression. Depressed adults might have generally negative memories of their childhood experience, which might lead to adverse reports of their parents along diverse dimensions. Youth reports of their parents' current behavior might be less subject to effects of mood-induced memory distortion. Such concurrent assessment methods, using youth samples, have been recommended by Rapee (1997), who also predicted that perceived parental rejection would be found to be "more specifically related to depression" than would perceived parental control (Rapee, 1997, p. 58).

Since the time of Rapee's (1997) widely-cited review, studies have assessed concurrent associations between reports of youth depressive symptoms and parental rejection and control. Garber, Robinson, and Valentiner (1997) found that mothers who were described as less accepting and more controlling (both by their own reports and their child's report) were found to have children with higher levels of depressive symptomatology. In addition, the study identified unique pathways between the dimensions of parenting and depressive symptoms in addition to mediational pathways via the proposed mediator of self-worth. Muris, Meesters, Schouten, and Hoge (2004) found that, consistent with Rapee's (1997) hypothesis, children's perceptions of parental control were more strongly associated with anxiety symptoms than depression symptoms, whereas perceived parental rejection was more closely associated with depressive symptoms than anxious symptoms. Nolan, Flynn, and Garber (2003) found further support for a rejection-depression link in a prospective study that examined reports of parental rejection across informants (adolescent reported, parent-reported and teacher-reported). Nolan et al. did find that rejection predicted depression within a sample of non-clinically referred youth. The investigation did not compare rejection to control.

The previous studies have each contributed useful evidence regarding the association between parental behavior and youth depression. However, none of the studies has assessed the association within a sample of youngsters whose distress and dysfunction is significant enough to warrant clinical referral. Because the outcome of interest in this body of research—i.e., depression—is clinical in nature, it seems important to examine the parenting-depression connection within a clinical sample. To do this, we obtained a sample of youths who had all been referred for outpatient treatment because of significant clinical problems. We sought to learn, for this sample, whether depressive symptoms would be significantly related to perceived parental rejection, perceived parental control, or both. The answer could have important implications for our understanding of youth depression and for intervention design—particularly in the case of parent-focused intervention.

We also investigated a possible mediator of the association between perceived parenting and youth depression. Although children's perceptions of parents as controlling or rejecting may contribute directly to youth depression, it is possible that parenting practices have their impact via certain patterns of cognition that develop in youths who experience the parenting. If so, a particularly important dimension of cognition to investigate may be youth perceived control. We define perceived control as the degree to which one believes that desired outcomes can be achieved through one's own actions. There is evidence that even in infancy and early childhood, children are beginning to work out perceptions and beliefs regarding the extent to which they can exert control over events in their own lives (e.g., Schneewind, 1995). Previous research suggests that the emerging sense of self-agency and personal control is shaped at least in part by early interactions with objects and people in the child's environment (e.g., Rochat & Striano, 2000). Developmental research examining the antecedents of perceived control has linked children's interactions with parents to their development of control-related beliefs (Deci & Ryan, 1987; Grolnick & Slowiaczek, 1994; Grolnick, Gurland, DeCourcey, & Jacob, 2002). And considerable research has shown that low

levels of perceived control are associated with higher levels of internalizing symptomatology in general and depression, in particular (see e.g., Chorpita & Barlow, 1998; Muris & Merckelbach, 1998; Muris et al., 2004; Muris, Schouten, Meesters, & Gijsbers, 2003; Weisz, Southam-Gerow, & McCarty, 2001; Weisz, Sweeney, Proffitt, & Carr, 1993).

It is certainly possible that low levels of perceived control could result from either form of parenting featured in the literature reviewed here. Excessively controlling parenting could lead children to perceive that they themselves lack control, because so many of the outcomes in their lives are determined by significant others (see e.g., Dornbusch, Ritter, Leiderman, & Roberts, 1987; Ginsburg & Bronstein, 1993; Grolnick & Ryan, 1990; Grolnick, Ryan, & Deci, 1991). Controlling parenting, as reported by children, has been found to be associated with lower perceived competence and more external attributions of control (Dornbusch et al., 1987; Ginsburg & Bronstein, 1993; Grolnick & Ryan, 1990; Grolnick et al., 1991).

Rejecting parenting, too, might lead children to perceive that they lack control as their efforts to engage and seek support and help from the most important adults in their lives fail repeatedly. Perceptions of parents as rejecting and unresponsive might be expected to undermine children's beliefs in their own sense of control—i.e., instilling the perception that the child's actions may make no difference to an unresponsive parent and thus not lead to desired outcomes. Consistent with this reasoning, previous research has suggested that rejection, may affect the development of perceived control and cognitive schemas in general (Carton & Nowicki, 1996; Carton, Nowicki, & Balser, 1996; Muris et al., 2004; Nolen-Hoeksema, Wolfson, Mumme, & Guskin, 1995). Muris et al. (2004) found significant correlations between children's perceived control and perceived parental emotional warmth vs. rejection but not between children's perceived control and overprotection or anxious rearing, despite a seemingly strong conceptual link.

This one finding suggests that higher levels of perceived parental rejection might be associated with lower levels of youth perceived control. But it is certainly possible that low levels of perceived control might mediate the relation between either parental control and youth depression or parental rejection and youth depression. Either way, we thought it plausible that perceived control would mediate the relation between perceived parenting—either controlling or rejecting—and depressive symptoms in youth. Previous studies probing possible mediation have been valuable, but have either not probed depression independent of other kinds of negative affect (Chorpita, Brown, & Barlow, 1998) or not employed a clinical sample (Muris et al., 2004). In the present study, we used standard measures of perceived parenting, perceived control, and depressive symptoms specifically, and we employed a clinical sample, to test the hypothesis that the relation between perceived parenting and youth depression is mediated by youth perceived control.

Given our focus on youth cognition, perceived parenting, and depressive symptomatology, each of which may be influenced by developmental level and gender, we thought it wise to be sensitive to possible developmental and gender differences in the mediational process being tested. Previous studies have noted developmental differences—particularly between children and adolescents—in control-related beliefs, perceptions of parents, and rates of depressive symptoms (e.g., Birmaher et al., 1996; Kovacs, 1992; Skinner, Zimmer-Gembeck, & Connell, 1998; Weisz, 1990; Weiss et al., 1991). None of these lines of evidence leads directly to a specific prediction about developmental differences in the mediational process we have hypothesized linking perceived parenting, perceived control, and depressive symptoms. Furthermore, gender differences have been noted in control-related beliefs and depressive symptoms, particularly between children and adolescents (e.g., Birmaher et al., 1996; Weiss et al., 1991; Weisz et al., 2001). Yet again the evidence did not point to a specific gender hypothesis regarding the mediational models of interest. However, the evidence did suggest a need to check for development and gender differences in our model. Accordingly, we tested our proposed model separately for boys and girls, and for youths aged 11 and younger versus 12 and older.

To summarize, in this study, we examined concurrent associations among perceived parental rejection, perceived parental control, and depressive symptoms within a sample of clinic-referred youth. We first sought to determine if perceptions of parental rejection, parental control, or both might be associated with depressive symptoms. Then we tested a mediational model positing that the relation between perceptions of parenting and youth depressive symptoms is mediated by youth perceived control. And finally, we assessed robustness of the mediational model across gender and age groups.

Method

Participants

Participants were children and their families seeking treatment in any of seven participating outpatient community-based clinics in southern California. Those children who showed evidence of mental retardation or psychotic symptoms, and families whose clinic contact was court-mandated, were excluded from the study. The sample included 155 youths aged 7 to 17 years ($M = 11.86$, $SD = 2.463$); 68 (44%) were children aged 7–11 years and 87 (56%) were adolescents aged 12–17 years; 89 were boys (57%), and 66 were girls. Ethnic diversity of the children was representative

of a clinical population in the area, with 43% Caucasian, 20% Hispanic, 18% African American, and 19% other or mixed ethnicity.

Living arrangements took diverse forms, but the most common were youth living with mother figure only (39%), with both biological parents (19%), with a mother figure and her spouse/partner (15%), and with mother figure and other relative(s) (10%). Some 40% of families reported incomes below $15,000 per year, 35% incomes between $15,000 and $30,000, 12% incomes between $30,000 and $45,000, 5% incomes between $45,000 and $60,000, 1% incomes between $60,000 and $75,000, and 7% incomes over $75,000. Some 84% of the mother figures and 70% of the father figures interviewed had completed at least one year of college.

Except for exclusions noted above, all families inquiring about clinic services during the period of the study were invited to participate in the study. Clinic policies prevented exact counts, but estimates were that more than 80% of those invited agreed to take part. The research assessment took place after the clinic intake appointment but prior to the onset of therapy. All families were seeking outpatient care, but for a variety of concerns, in some cases involving depression. Thus, the sample was heterogeneous diagnostically. For example, according to child-report on the Diagnostic Interview Schedule for Children (DISC), 8.6% of children met criteria for Major Depressive Disorder (MDD), 11.2% for Dysthymia, 12.8% for Generalized Anxiety Disorder (GAD), and 13.9% for Conduct Disorder. According to parent-report on the DISC, 20.3% of youth met criteria for MDD, 18.9% for Dysthymia, 18.4% for Conduct Disorder and 36.3% for Attention-Deficit Hyperactivity Disorder (ADHD). Scores on the Children's Depression Inventory (CDI; Kovacs, 1992; discussed below) averaged 9.37, with 28% above the clinical cutoff of 12 (following Kazdin, Colbus, & Rodgers, 1986; Kovacs, 1992; Lobovits & Handal, 1985). Thus, rates of depressive disorder and levels of depressive symptomatology were higher than in the general population of youth, indicating that our use of a clinical sample did, as intended, produce greater variability in depression than would be found in a typical general population sample.

Measures

Children's report of parent behavior inventory (CRPBI)

Perceptions of parenting were assessed using Schludermann and Schludermann's (1970) revision of the original measure by Schaefer (1965). The items describe parent behavior, and the respondent rates the degree to which each behavior is true of his or her parent, using a three-point scale: 0 = *not at all true*, 1 = *somewhat true*, 2 = *very true*. In the current study, children were asked to complete the measure with regard to their mother or mother figure (if the child did not live with a biological mother). Two subscales were analyzed due to their fit to the constructs of interest in the present study: *rejection* (10 items–e.g., "Acts as though I'm in the way," "Often seems glad to get away from me") and *control* (10 items–e.g., "Wants to control whatever I do," "Always tells me exactly how to do my work"). Schwarz, Barton-Henry, and Pruzinsky (1985) found that internal consistency coefficients (alpha) for the CRPBI fell between .57 and .86. In the current sample, alphas were .71 for the rejection subscale (α = .72 for youth less than 12 years of age; α = .72 for youth 12 years and above) and .78 for the control subscale (α = .67 for youth younger than 12; α = .82 for youth 12 and older).

Perceived control scale (PCS)

The PCS (Weisz, Southam-Gerow, & Sweeney, 1998) is a 24-item questionnaire measuring beliefs about one's ability to exert control over outcomes in academic, social and behavioral domains. Half of the items are worded such that higher scores indicate higher levels of perceived control (e.g., "I can be popular with kids my age, if I really try") though the other half are worded in the reverse direction (e.g., "Even if I try, I cannot be popular with kids my age"). Each item provides a 4-point Likert scale (1 = *very false*, 2 = *sort of false*, 3 = *sort of true* and 4 = *very true*). In a clinically referred youth sample, Cronbach's alpha was found to be .88 (Weisz et al., 2001). In the current sample, alpha was .89 for the entire sample (α = .90 for youth younger than 12; α = .88 for youth 12 and older).

Children's depression inventory (CDI)

This 27-item questionnaire is a widely used self-report measure of depressive symptoms in children (Kovacs, 1992). Each item lists three statements (e.g., "I hate myself." "I do not like myself." "I like myself.") and the child is asked to choose which sentence describes him/her best over the past two weeks. The CDI has been shown to have adequate internal consistency, test-retest reliability and convergent validity with other self-report measures. In clinical samples, the CDI has shown Cronbach's alphas ranging from .71 to .89 (Kovacs, 1992). In the current sample, alpha was .84 for the entire sample (α = .87 for youth younger than 12; α = .80 for youth 12 and older).

Alpha by age

Given the broad age range of the sample, we checked to see if Cronbach's alpha values for CDI, CRPBI parental

Table 1 Correlations between perceived parental behaviors, perceived control and depressive symptoms for all youth

$N = 155$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

	(1)	(2)	(3)	(4)	*M* (*SD*)
(1) CRPBI Rejection	–				4.99 (3.75)
(2) CRPBI Control	.13	–			6.27 (2.28)
(3) Perceived Control	−.41**	−.002	–		79.46 (11.33)
(4) CDI	.47***	.05	−.59***	–	9.37 (6.76)

rejection, CRPBI parental control, or the Perceived Control Scale were significantly correlated with age. To check this, we computed alpha values for the subsample at each yearly age level (for ages 7–17, inclusive). The correlation was positive but nonsignificant for each of the measures, with *r* ranging from .13 (CRPBI rejection) to .37 (CDI), and *p*-values ranging from .36 to .76.

Results

Results of the study are presented in relation to the primary questions outlined in the introduction.

Perceived parenting and symptoms of depression

Simple linear regression analyses were conducted separately for perceived parental rejection (CRPBI) and depression symptoms (CDI), and for perceived parental control (CRPBI) and depression symptoms (see Table 1). Perceived parental rejection was strongly associated with CDI scores ($r = .47$, $p < .001$); perceived parental control was not.

Next we assessed whether the association between CDI and perceived parental rejection held up in both genders and in children (ages 11 and younger) and adolescents (ages 12 and older), considered separately. An 11–12-year age break was selected because of data indicating that a conservative estimate of average puberty onset in the US falls between 11 and 12 (see e.g., Gallahue & Ozmun, 1995; Jaffe, 1998).

CRPBI rejection was significantly associated with CDI for both males and females (males: $r = .47, p < .001$; females: $r = .46, p < .001$). CRPBI rejection was also significantly associated with CDI among children ($r = .61, p < .001$) and adolescents ($r = .38$, $p < .001$). The correlation between age and CDI score was not significant ($r = .04$, *ns*) nor was the relationship between age and perceived parental rejection ($r = .15$, *ns*).

Next, the relationship between perceived parental control and depression symptoms was examined. Perceived parental control, as measured by the CRPBI, did not significantly predict depressive symptoms ($r = .05$, *ns*) for the full sample. For both males and females, considered separately, the relationship between perceived parental control and symptoms of depression was not significant (males: $r = .06$, *ns*; females: $r = .06$, *ns*). The relationship was also not significant for either children or adolescents (children: $r = .10$, *ns*; adolescents: $r = -.01$, *ns*).

Perceived control as a mediator of the relation between perceived parental rejection and depression symptoms

The finding that the association between perceived parental rejection and depressive symptoms was highly significant set the stage for a test of our mediation hypothesis: that perceived control is a mediator of the relation between perceptions of parental behavior and youth depressive symptoms. To establish mediation, the independent variable (parenting) must predict the dependent variable (depression); the independent variable (parenting) must also predict the mediator variable (perceived control); the mediator (perceived control) must predict the dependent variable (depression); and the association between the predictor variable (parenting) and dependent variable (depression) must be attenuated or disappear when the mediating variable (perceived control) is controlled for (see Baron & Kenny, 1986). Linear regression analyses were conducted for each pair of variables implicated in the mediational model, to determine the strength and direction of the particular relationships before testing mediation. The relation between CRPBI rejection and the CDI was significant and positive ($\beta = .47$, $p < .001$). The relation between CRPBI rejection and perceived control was significant and negative ($\beta = -.41$, $p < .001$). Perceived control was also significantly associated with the CDI ($\beta = -48, p < .001$). The introduction of the hypothesized mediator, perceived control, reduced the association between CRPBI rejection and CDI scores ($\beta = .27$; see Fig. 1). According to the Sobel test (4.34, $p < .001$), this reduction was significant, indicating that perceived control partially

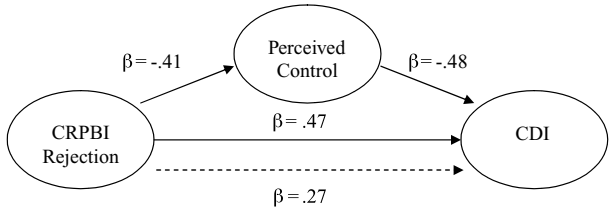

Fig. 1 Mediational model of perceived parental rejection, perceived control and symptoms of depression for all youth. The two betas at the bottom of the figure represent the β before (*solid*) and after (*dashed*) the introduction of the mediator into the regression model

mediated the relationship between perceived parental rejection and depressive symptomatology.

Lack of support for alternate mediational model

We assessed the discriminant validity of the mediational model for parental rejection by assessing whether an alternate model—i.e., with perceived parental control (rather than perceived parental rejection) as independent variable—could be ruled out. The alternative model was, in fact, readily ruled out. *Perceived parental control was not associated with CDI* ($r = .05$, $p = .531$) or with youth perceived control ($r = .00$, $p = .980$), clearly indicating that the alternate model had no support.

Robustness of the mediation model across age groups

To assess the robustness of the mediational model across developmental levels, separate analyses were conducted for children and adolescents (see Fig. 2). For children, the relationship between CRPBI rejection and CDI was significant ($\beta = .61$, $p < .001$); CRPBI rejection was significantly associated with perceived control (mediator) ($\beta = -.49$, $p < .001$); and perceived control was correlated with CDI ($\beta = -.40$, $p < .001$). The introduction of perceived control into the model significantly reduced the relation between parenting and symptomatology (Sobel $= 2.98$, $p < .01$). For adolescents, CRPBI rejection was correlated with CDI ($\beta = .38$, p $\leq .001$); CRPBI rejection also was correlated with perceived control ($\beta = -.32$, $p < .01$); and perceived control was significantly associated with CDI ($\beta = -.56$, $p < .001$). Analyses indicated that perceived control mediated the relationship between perceived parental rejection and depressive symptoms (Sobel $= 2.77$, $p < .01$) because the introduction of the mediator reduced the strength of the original relationship substantially ($\beta = .21$, $p < .05$). Thus, despite differences in cognitive development between children and adolescents, cognitions regarding perceived control mediated the relationship between perceived parental rejection and depressive symptoms in both age groups.

We carried out one additional age-related analysis, to address one possible developmental concern—i.e. that the inclusion of younger children might have distorted our results (e.g., due to an inability to validly complete the study measures). We repeated the test of our proposed mediation model with 7- and 8-year-olds excluded from the sample. The test showed continued support for the model. CRPBI rejection was correlated with CDI ($\beta = .47$, $p \leq .001$); CRPBI rejection also was correlated with perceived control ($\beta = -.36$, $p < .01$). Perceived control was correlated with CDI ($\beta = -.56$, $p < .001$). And perceived control mediated the relationship between perceived parental rejection and depressive symptoms (Sobel $= 3.83$, $p < .001$). Discriminant validity of the model for this sample was indicated by an absence of support for the alternate mediational model with perceived parental control entered instead of perceived parental rejection (e.g., CRPBI control and CDI were correlated only .04).

Robustness of the mediation model across gender

When boys and girls were analyzed separately, the mediational model again proved robust (see Fig. 3). For males, CRPBI rejection was correlated with CDI score ($\beta = .47$, $p < .001$); CRPBI rejection also was correlated with

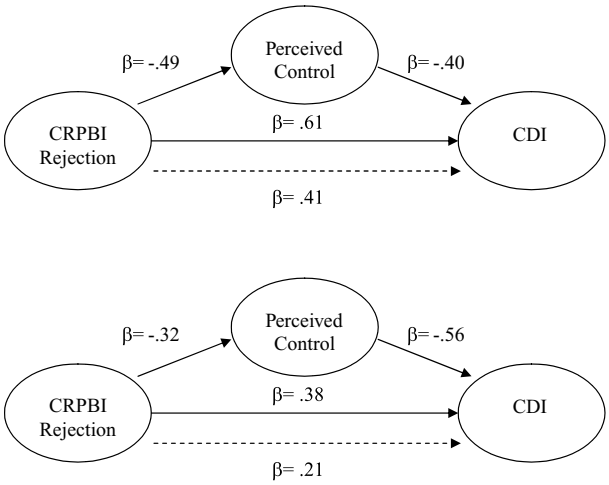

Fig. 2 Mediational model of perceived parental rejection, perceived control and symptoms of depression for children (*top*) and for adolescents (*bottom*). The two betas at the bottom of each figure represent the β before (*solid*) and after (*dashed*) the introduction of the mediator into the regression model

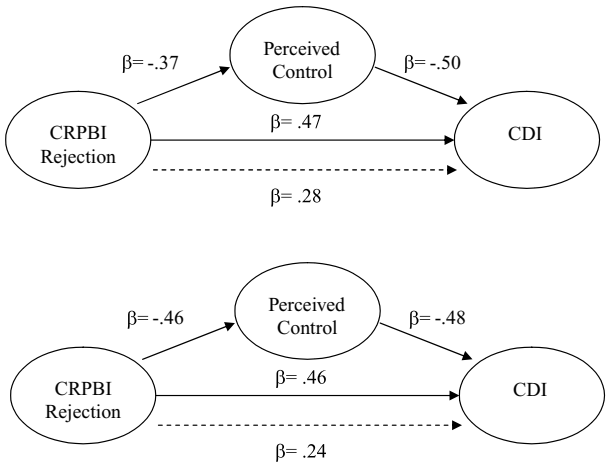

Fig. 3 Mediational model of perceived parental rejection, perceived control and symptoms of depression for males (*top*) and females (*bottom*). The two betas at the bottom of each figure represent the β before (*solid*) and after (*dashed*) the introduction of the mediator into the regression model

perceived control ($\beta = -.37$, $p < .001$). Finally, perceived control was significantly associated with CDI score ($\beta = -.50$, $p < .001$). Analyses indicated that the mediating effect of perceived control on the relationship between perceived parental rejection and symptoms of depression was significant for boys (Sobel $= 3.10$, $p < .01$) because the introduction of the mediator reduced the strength of the original relationship ($\beta = .28$, $p < .01$).

For girls, the relation between CRPBI rejection and CDI score was significant ($\beta = .46$, $p < .001$); CRPBI rejection was significantly associated with perceived control (mediator) ($\beta = -.46$, $p < .001$); and perceived control was correlated with the CDI score ($\beta = -.48$, $p < .001$). Introduction of the mediator reduced the relationship between perceived parenting and symptomatology ($\beta = .24$, $p < .05$) thus demonstrating mediation for females (Sobel $= 3.00$, $p < .01$). Thus, the results showed support for the model among both males and females.

Discussion

This study was designed to discern whether perceived parental rejection, perceived parental control, or both were associated with youth depressive symptoms, and to test a specific mediational model, all within a youth clinical sample. The findings may help illuminate the process by which perceived parental behavior is linked to the development of depressive symptoms in youth. Analyses focused on the first question established that perceived parental rejection was strongly associated with symptoms of depression in youth and that perceived parental control was not. Perceived parental rejection, in fact, was robustly related to depressive symptoms across age groups and gender, with higher levels of perceived rejection linked to higher levels of depressive symptomatology in each subgroup tested. These findings suggest that perceptions of parental rejection, but not perceptions of parental control, are related to symptoms of depression. This is consistent with Rapee's (1997) suggestion that perceived parental rejection is more specifically related to youth depression than is perceived parental control. The specificity of the relationships between perceived parenting and symptomatology (i.e., the fact that no association was found with perceived parental control), plus the low correlation between perceived control and perceived rejection ($r = .13$), argues against an artifactual interpretation that the experience of depression taints the child's report of parental behaviors creating spurious correlations between depressive symptoms and all forms of perceived parenting.

The second main finding of the study was that perceived control mediated the relation between perceptions of parental rejection and youth depressive symptoms. This finding is consistent with previous work demonstrating that children's control-related beliefs are significantly associated with depression, with low levels of perceived control linked to higher levels of depressive symptoms (Muris et al., 2003; 2004; Weisz et al., 2001). Importantly, the mediational findings were robust across gender as well as across age groups. Thus, the results suggest a potentially resilient association between perceived parental rejection and youth depressive symptomatology as well as a potentially important mechanism through which the association appears to operate.

The findings may have implications for the design of prevention and treatment programs targeting youth depression. The results suggest the possibility that modification of either youngsters' control-related beliefs or their parents' behavior might reduce the risk of youth depressive symptomatology. Indeed, some youth depression intervention programs have been designed to enhance youngsters' ability to exert control over conditions in their lives, and thus to enhance perceived control (e.g., Weisz, Thurber, Sweeny, Proffit, & LeGagnoux, 1997). In addition, some interventions that are based on multiple risk factor models of depression include adjunct parent training (for a review see Barrett, 2001). The present findings carry implications for the content of such training, suggesting that one important goal may need to be modifying parent behaviors that convey (even if unintentionally) a message of rejection.

The findings should be considered in the light of certain study limitations. First, all of the measures were based on youth self-report. Self-reported phenomenology may be quite important, especially in relation to depression, but it should not be equated with directly observed behavior. With regard to self-report biases, the lack of a significant relationship between perceived parental control and depressive symptomatology, coupled with the nonsignificant correlation between perceived parental rejection and perceived parental control, suggests that despite the subjective experience of depression, children were not uniformly rating parental behavior in a negative direction. Nonetheless, the use of self-report measures in the present study needs to be complemented in future work by other approaches. The use of other informants could be helpful; and the use of observational measures of parent-child interaction could also be a valuable addition to the literature, to the extent that investigators could elicit interactions that are truly representative of everyday parent-child exchanges. More broadly, as illustrated by Garber et al. (1997), a multi-trait, multi-method approach to this topic could offer a particularly rich perspective.

A second consideration is that the study's cross-sectional design limits conclusions to those concerning associations between variables. The findings suggest that perceived parental rejection may lead to diminished perceived control which in turn may lead to depressive symptoms; but the findings cannot provide direct evidence on causal

processes or determine the direction of the relationships. A direct test of the causal hypothesis awaits future research using longitudinal designs.[1] Another limitation is that we focused on only one potential mediator of the relation between perceived parenting and depressive symptoms (i.e., perceived control); other potential cognitive mediators (e.g., rumination, negative attributional style, etc) may warrant attention in future research. Finally, our reliance on a clinical sample, while useful for reasons noted in the introduction, may limit generalization to the broader population (see Goodman, Lahey, Fielding, & Dulcan, 1997).

The study also has significant strengths. First, it is useful to move from the kinds of associations identified in prior research to tests of specific mediational processes that may be involved in the development of depression. Second, our use of a clinical sample helps illuminate a possible pathway into depression within a particularly relevant population reference group, given the clinical issues addressed in the study. Third, reliance on youth self-report, though it represents a study limitation in the ways noted above, is a strength in one important respect related to the goals of the present study: To the extent that the key question is how youth *perceptions* of their parents' behavior relate to youth psychopathology, self-report measures are ideal ways of capturing youth phenomenology. In these respects, the present study is a useful step, illuminating potential pathways into youth depression, suggesting elements that may help prevent or ameliorate the condition, and pointing the way to questions for future research.

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