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Parent and Adolescent Reports of Parenting When a Parent Has a History of Depression: Associations with Observations of Parenting

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Abstract

The current study examined the congruence of parent and adolescent reports of positive and negative parenting with observations of parent-adolescent interactions as the criterion measure. The role of parent and adolescent depressive symptoms in moderating the associations between adolescent or parent report and observations of parenting also was examined. Participants were 180 parents (88.9% female) with a history of clinical depression and one of their 9-to-15 year old children (49.4% female). Parents and adolescents reported on parenting skills and depressive symptoms, and parenting was independently observed subsequently in the same session. Findings indicated adolescent report of positive, but not negative, parenting was more congruent with observations than parent report. For negative parenting, depressive symptoms qualified the relation between the parent or adolescent report and independent observations. For parents, higher levels of depressive symptoms were associated with more congruence with observed parenting (supporting a depressive realism hypothesis) whereas an opposite trend emerged for adolescents (providing some supporting evidence for a depression-distortion hypothesis).

Keywords

parenting; adolescent report; parent report; independent observations; depressive symptoms

Approximately 15 million children in the United States grow up in a household where a parent has experienced one or more episodes of a major depressive disorder (England &

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Sim, 2009). These children are at an increased risk of developing internalizing and externalizing disorders and symptoms (for reviews, see England & Sim, 2009; Goodman et al., 2011). One of the primary mechanisms for the transmission of risk for psychopathology in these families is parenting (for reviews, see Compas, Keller, & Forehand, 2011; Goodman & Gotlib, 1999; Goodman & Tully, 2006).

An issue that has faced the field, and is particularly difficult when a parent has a history of depression, is how to assess parenting (see McKee, Jones, Forehand & Cuellar, 2013, for a review). Observations of parent-child interactions by independent raters, which can provide relatively objective data about parenting (McKee et al., 2013), indicate that higher levels of negative parenting and lower levels of positive parenting are linked to a parent's depression; however, with older children, the support for the association of negative parenting with parental depressive symptoms is stronger than the support for the association of positive parenting with parental depressive symptoms (Forehand et al., 2012; also see Lovejoy, Graczyk, O'Hare, & Neuman, 2000, for a review). However, observations are both time-consuming and costly to collect and code. An alternative, which is more economical, is parents' report of their own parenting (e.g., Gerdes et al., 2007; Leung & Slep, 2006). Unfortunately, in the general parenting literature, the validity of parent report of parenting has been questioned (e.g., Salihovic, Kerr, Ozdemir, & Pakalniskiene, 2012) as it may be "systematically biased" (Taber, 2010, p. 1001). This may be more *or* less the case when a parent has a history of depression as is illustrated by two competing hypotheses about how depression influences self-report: depression→distortion (Richters, 1992) and depressive realism (Alloy & Abramson, 1979; see Moore & Fresco, 2012, for a recent review). Applying these two hypotheses to self-report of parenting, the former would suggest that higher levels of depressive symptoms may distort the accuracy of self-report of parenting whereas the latter would suggest that higher levels of depressive symptoms will be associated with a *more* accurate report of parenting. Since parental depression occurs in many households and is related to parenting, and given that assessment by direct observation is time-consuming and costly, identifying how depressive symptoms influence self-report is critical. This is particularly the case when the depression → distortion and depressive realism hypotheses suggest opposite conclusions.

When depressed parents have been studied, the focus has *not* been on self-report of parenting but parent report of child behavior. Some support has been found for some aspects of *both* the depression → distortion hypothesis (higher levels of parental depressive symptoms are associated with over-reporting of negative child behavior; e.g., Chi & Hinshaw, 2002; Gartstein, Bridgett, Dishion, & Kaufman, 2009; Youngstrom, Izard, & Ackerman, 1999; also see Goodman et al., 2011, for a recent review) *and* for the depressive realism hypothesis (higher levels of parental depressive symptoms are associated with more accurate reports of child behavior; e.g., Lovejoy, 1991; Querido, Eyberg, & Boggs, 2001).

The current study extended the test of the depression→distortion hypothesis (Richters, 1992) versus the depressive realism hypothesis (Allow & Abramson, 1979) in two ways. First, parents with a history of major depressive disorder (MDD) were examined. The research cited in the preceding paragraph examined samples of children who were recruited based on their clinic-referred or high-risk status (e.g., Garstein et al., 2009; Querido et al., 2001). By selecting the current sample based on the parent characteristic of interest (i.e., depression), the issue of low levels of depressive symptoms for many parents (i.e., floor effects) can be avoided.

Second, parent self-report of their parenting behavior, rather than their child's behavior, was studied. Chi and Hinshaw (2002) are the only investigators who have examined parenting as a criterion. They found that maternal depressive symptoms were not associated with

observed negative disciplinary strategies used by parents but were related to self-report of such strategies *and* to discrepancies between mother and child report of negative (but not positive) discipline strategies. Taking these findings in combination, one plausible hypothesis is that child report is more accurate than parent report. Two studies in the general parent-child literature (i.e., parent depressive symptoms were not examined) provide some support for this conclusion: Both Scott, Briskman, and Dadds (2011) and Sessa, Avenevoli, Steinberg, and Morris, (2001) found that child report of parenting was more congruent with independently observed parenting than parent report. The current study extended these findings by contrasting the association of parent report and independent observations of parenting with child report and independent observations of parenting when a parent has a history of depression.

We hypothesized that parent and child reports would both relate modestly to what has been called an "ideal criterion measure" (Taber, 2010, p. 1001): independent observations of negative and positive parenting. However, based on the findings of Scott et al. (2011) and Sessa et al. (2001), we expected a stronger relationship to emerge for child report than parent report. We also expected parent depressive symptoms to moderate the relationship between parents' self-report and independently observed parenting as both the depression→distortion and depressive realism hypotheses would forecast an interaction. Explication of the interaction would likely support one of the two hypotheses. If higher, relative to lower, levels of depressive symptoms are associated with more congruence between self-report and independently observed observations, then the depressive realism hypothesis will be supported. Alternately, if lower, relative to higher, levels of depressive symptoms are associated with more congruence, the depression→distortion hypothesis will be supported.

As De Los Reyes, Goodman, Kliewer, and Reid-Quiñones (2008) have emphasized the importance of assessing both parent and child depressive symptoms, we also conducted parallel analyses examining whether adolescent depressive symptoms moderated the relationship between adolescent report of parenting and independently observed parenting. However, because adolescent involvement in the project was not based on their history of depression and there is not a literature on the role of adolescent depressive symptoms in adolescent report of parenting, we viewed these analyses as exploratory. Nevertheless, the findings can provide important data on whether depressive symptoms of adolescents living in a families with a depressed parent qualify their report of parenting.

We examined measures of positive and negative parenting from the perspective of the parent, child, and independent observers. Some evidence would suggest that differential findings might emerge across the two types of parenting. Specifically, negative parenting is more strongly associated with parental depression than positive parenting for older children (Lovejoy et al., 2000). Furthermore, as we have noted, Chi and Hindshaw's findings (2002) suggest that parental depressive symptoms are associated with discrepancies in parent and child reports of negative, rather than positive, parenting. This may result from depressive symptoms leading to recall of primarily negative information about parenting behavior (De Los Reyes et al., 2008). As a consequence, we hypothesized that stronger associations between parent report and independent observations would emerge for negative than for positive parenting. Furthermore, parental depressive symptoms may serve as a moderator for negative, but not positive, parenting.

In order to maximize the detection of relationships across different methodologies for measuring parenting (i.e., parent report to independently observed parenting and child report to independently observed parenting), we conducted assessments in a sequenced, contiguous manner. Specifically, we assessed parent and adolescent reports simultaneously, followed in

the same session by a parent-adolescent interaction that was independently observed and coded.

Method

Participants

One hundred and eighty families, all of which had a parent with a history of MDD (*M*age= 41.96) and one child in the target age range of 9-to-15 years (49.4% females; *M*age=11.46; *SD*=2.00), were recruited from the larger Burlington, Vermont and Nashville, Tennessee communities and included in current analyses. For families with multiple children in the target age range, one child was randomly selected for the current analyses. The majority of the target parents (i.e., those identified as having a history of MDD) were female (88.9%), married (61.7%) and educated (31.7% with 4 year college degree; 23.3% with graduate education) at baseline. Although participant ethnic composition was primarily Caucasian, with 25.6% of youth identifying as racial/ethnic minorities (12.8% Black or African American, 3.3% Asian, 1.7% Latino or Hispanic, 0.6% American Indian or Alaska Native, and 7.2% Mixed Race), the ethnic make-up of participants was, according to 2000 U.S. Census data, representative of the regions from which they were drawn. The data reported in the current study were from the baseline assessment of parents and adolescents enrolling in a preventive intervention program. The outcome of this intervention has been reported by Compas, et al. (2009, 2011).

Procedure

All study procedures were approved by the Institutional Review Boards at Vanderbilt University and the University of Vermont. All parents and adolescents were consented/ assented at the time of enrollment in accordance with the approved IBR procedures.

Families were recruited through a variety of means including flyers, newspaper and radio advertisements, and referrals from physicians. Interested families were screened first over the phone, followed by an in-person visit to determine eligibility. Inclusion criteria for parents included a history of MDD during the lifetime of the target child(ren) based on the Structured Clinical Interview for DSM (SCID; First, Spitzer, Gibbon, & Williams, 2001) (interrater reliability for diagnosis of MDD: 96% agreement, $\kappa = .76$). Exclusion criteria on the SCID consisted of a history of Bipolar I disorder, schizophrenia or schizoaffective disorder. If parents were either suicidal or had a current substance problem and had a global assessment of functioning (GAF) score of < 50, the family's participation was deferred, they were offered assistance with obtaining community mental health services, and rescreened at regular intervals for eligibility (see Compas et al., 2009, for training and reliability for the current project).

Youth in the age range of 9-15 years old were eligible if, based on the Schedule for Affective Disorders and Schizophrenia for School-Age Children- Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1997), they were free of lifetime diagnoses of autism spectrum disorders, mental retardation, Bipolar I disorder, and schizophrenia and if they did not currently meet criteria for conduct disorder or alcohol/substance use disorders (see Compas et al., 2009, for interviewer training and reliability in the current project). If youth were in an episode of depression (interrater reliability on K-SADS-PL for MDD diagnosis: 93% agreement, $\kappa = .71$) at screening, the family was deferred, provided appropriate referrals, and rescreened at regular intervals.

Measures

Demographic information—Target parents responded to demographic questions designed to capture information about themselves (e.g., parental age, education) and their families (e.g., household income). Youth also reported demographic information (e.g., sex, age).

Parent depressive symptoms—The Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996), was used to assess current levels of parental depressive symptoms. Participants responded to 21 items in which they chose the statement that best described the way they felt in the previous two weeks. Statements were rated on a 4-point Likert scale (e.g., *0* = "I do not feel sad", *1* = "I feel sad much of the time", *2* = "I am sad all the time" and *3* = "I am so sad or unhappy that I can't stand it"). Higher scores reflect more depressive symptoms over the past two weeks. The BDI-II has shown excellent internal consistency (α = .92) and correlates highly with other measures of depression (r = .93; Beck et al., 1996). Suggested categories for the BDI-II include: 0-13 = minimal depression; 14-19 = mild depression; 20-28 = moderate depression; and 29-63 = severe depression (Beck et al., 1996). The alpha coefficient for the current sample was .93.

Adolescent depressive symptoms—Youth depressive symptoms were assessed with the Center for Epidemiological Studies Depression Scale for Children (CES-DC; Weissman et al ., 1980), a self-report measure of the frequency of 20 depressive symptoms over the past week using a 4-point scale. Possible scores range from 0 to 60 with a score of 16 or above indicating significant depressive symptomology (Radloff, 1977). The CES-D is short and easy to read, has been successfully administered in several large school samples (e.g., Fendrich, Weissman, Warner, & Mufson, 1990; Roberts, Lewinsohn, & Seeley, 1991), and has good psychometrics with youths. Weissman et al. (1980), the developers of the CES-DC, have used the cutoff score of 15 as being suggestive of significant depressive symptoms in children and adolescents. Internal consistency in the current sample was .90.

Parent-reported and adolescent-reported parenting—The Alabama Parenting Questionnaire (APQ; Frick, 1991) was used to assess both parent-reported and adolescent-reported parenting behaviors from two categories (Rapee, 1997): positive parenting (e.g., positive involvement/parenting) and negative parenting (e.g., ineffective discipline). The APQ consists of 35 items (after deleting redundant items; Shelton, Frick, & Wooten, 1996), each rated on a 5-point scale from 1 (never) to 5 (always), that yield five parenting constructs: Parental Involvement, Positive Parenting, Poor Monitoring and Supervision, Inconsistent Discipline, and Corporal Punishment. Because the two positive parenting scales (i.e., Parental Involvement & Positive Parenting) are highly correlated across informant and assessment formats and because the three-item Corporal Punishment construct has low internal consistency (α = .49; Shelton et al., 1996), a three-factor model appears to be a better fit for the assessment of parenting practices.

A more recent principal components analysis of the APQ (Hinshaw et al., 2000) also supports a three-factor structure: Positive Involvement/Parenting; Deficient Monitoring; and Ineffective/Negative Discipline. As this factor structure is consistent with the three primary categories of parenting identified by Rapee (1997; i.e., warmth/involvement, control, and discipline), we derived the items constituting positive and negative parenting based on Hinshaw et al. (2000). Sample items of positive parenting include the following: "You let your child know when he/she is doing a good job with something;" and "You play games or do other fun things with your child." Sample items of negative parenting include the following: "You threaten to punish your child and then do not actually punish him/her;" "You feel that getting your child to obey you is more trouble than it's worth;" and "The

punishment you give your child depends on your mood." The three corporal punishment items were not included in the negative parenting construct for two reasons: (1) IRB concerns (i.e., reporting potentially abusive behaviors) resulted in the items not being administered; and (2) as corporal punishment is very unlikely to occur during behavioral observations, inclusion of these items could artificially lower the association between APQ rated and behaviorally observed negative parent behaviors. Possible values for positive parenting ranged from 16 to 80 (parent-report: α = .92; adolescent-report: α = .92), with higher values indicating more positive involvement/parenting; and possible values for negative parenting ranged from 8 to 40 (parent-report: α = .77; adolescent-report: α = .76), with higher values indicating *less* effective discipline. In regard to adolescent report, Barry, Frick, and Grafeman (2008) indicated that children ages nine years and older can provide valid reports of parenting.

Observations of parenting—A global coding system, the Iowa Family Interaction Rating Scales (IFIRS; Melby, Conger et al., 1998), was used to code two videotaped 15-minute interactions of the parent with a history of major depression (who was sometimes the mother and other times the father) and the adolescent: First, a discussion of a pleasant activity that the target parent and adolescent enjoyed doing together in the past couple of months (e.g., going on family vacation, a child's birthday party); and second, a discussion of a stressful time when the target parent was depressed, down, or irritable, which made it difficult for the family (e.g., mother had a bad day at work and was upset and angry; the adolescent often being late to school because mom has trouble getting everyone going in the morning). The conversations were videorecorded.

The IFIRS is a global coding system designed to measure behavioral and emotional characteristics at both the individual and dyadic level. Behaviors and emotions are coded on a 9-point scale. In determining the score for each code, the frequency and intensity of behavior, as well as the contextual and affective nature of the behavior, are considered. The validity of the IFIRS system has been established using correlational and confirmatory factor analyses (Aldefer et al., 2008; Melby & Conger, 2001). Training is described in Compas et al. (2010). All interactions were double-coded by two independent observers and coders met to establish consensus on any discrepant codes (i.e., codes that were rated greater than two points apart or greater on the 9-point scales). Inter-rater reliability prior to consensus coding for the IFIRS composite codes, as indexed by an average ICC, was .73 across both tasks.

Following procedures used previously with the IFIRS codes (e.g., Lim, Wood, & Miller, 2008; Melby et al., 1998), scores were averaged across the two 15-minute interactions for each code and then composite codes were created for positive (possible range: 6-54) and negative (possible range: 5-45) parenting that reflected the parenting skills that were taught in the subsequent intervention (see Compas et al., 2009). These skills were based on theory-driven and empirically-supported disruptions in parenting related to depression as well as establishing authoritative parenting skills (i.e., balance of warmth and structure). The positive parenting composite included the following codes: warmth (i.e., the degree to which the parent expresses liking, appreciation, praise, care, concern, or support for the child); child-centered behaviors (i.e., parent displays an awareness of the child's needs, moods, interests, and capabilities); positive reinforcement (i.e., the extent to which the parent responds positively to the child's "appropriate" behavior or behavior that meets specific parental standards); quality time (i.e., the extent of the parent's regular involvement with the child in settings that promote opportunities for conversation, companionship, and mutual enjoyment); listener responsiveness (i.e., parent behaviors that validate and indicate attentiveness to the child); and adolescent monitoring (i.e., the extent of the parent's specific knowledge and information concerning the child's life and daily activities) (α = .81). The

negative parenting composite included the following codes: parental negative affect (sadness and positive mood, reverse scored); hostility (i.e., the extent to which hostile, angry, critical, disapproving, rejecting or contemptuous behavior is directed to the child); intrusiveness (i.e., intrusive or overcontrolling behaviors), neglect/distancing (i.e., ignoring or psychological/physical distancing in the interaction situation); and externalize negative (i.e., negativity expressed in the form of anger, hostility, or criticisms regarding people, events, or things outside the immediate setting) (α = .70).

Data Analytic Plan

As missing data were less than 5% overall for main study variables, missing data were treated as ignorable (missing at random) and multiple imputation in SPSS version 20.0 was used for inclusion of all available data. Analyses across the five imputed datasets were averaged and the pooled statistics are reported for all analyses. Next, bivariate correlations were conducted to examine the relations among the major study variables considered in this study. Additionally, correlations or analysis of variance were utilized to examine the relation between key demographic variables (i.e., parent gender, child gender, adolescent age, and, as a proxy for family socioeconomic status, household income) and independently observed parenting. If significant associations emerged, the demographic variable(s) were entered as covariates in primary regression analyses.

To examine the main study hypotheses, two sets of three hierarchical linear regression analyses were conducted. In the first set, independently observed positive parenting served as the dependent measure. If significant associations between demographic variables and observations of positive parenting emerged, demographic controls were entered in the first block. In the first regression, parent reported positive parenting (APQ-Positive Involvement/Parenting subscale) was entered in the second block with the parent's BDI score, and finally in the third block, the interaction between parent reported positive parenting and parent's BDI score was entered. Second, the analyses were repeated using adolescent, rather than parent, reported parenting and depressive symptoms. Third, the parent and child models were combined such that all parent and child reported variables were included in a single model. The next set of three regression analyses followed the same order as the first set except for the parenting construct examined: Parent or adolescent reported negative parenting (APQ- Ineffective/Negative Discipline) was the primary independent variable and independently observed negative parenting served as the dependent variable.

Results

Preliminary Analysis

Descriptive statistics and bivariate correlations among main study variables are presented in Table 1. Adolescent and parent reported positive parenting both correlated significantly and in the expected direction with independently observed positive parenting. Of particular interest, the correlation between adolescent report and independent observations was more than double the correlation for parent report and the difference between the two was statistically significant ($z = 2.57$, $p < .05$). Adolescent and parent reported negative parenting both correlated significantly and in the expected direction with independently observed negative parenting. The two correlations were similar in magnitude and were not significantly different from one another ($z = 0.20$). Of note, both parent (BDI) and adolescent (CES-D) depressive symptoms correlated significantly and in the expected direction with independently observed positive and negative parenting.

Prior to preliminary analyses, two of the demographic variables were adjusted. Parent marital status was transformed into a two category variable (1 = married or partner lived in

the home; 2 = single parent), and parent race was transformed into a two category variable (1 = Caucasian/non-Hispanic; 2 = not Caucasian/non-Hispanic) due to low frequency of parents identifying with a race other than Caucasian/non-Hispanic.

In terms of demographic variables, neither of the observed parenting variables differed by child gender (observed positive parenting: F [1, 168] = 2.52, p = .12; observed negative parenting: F [1, 168] = .07, p = .80) or parent gender (observed positive parenting: F [1, 168] = .12, p = .67; observed negative parenting: F [1, 168] = .82, p = .38) and thus parent and child gender were not controlled for in the primary analyses. Additionally, household income was not significantly related to observed positive (r = .06, p = .46) or negative (r = −.12, p = .13) parenting and was not controlled in primary analyses. Positive (F [1, 168] = 55.68, p < .001) and negative (F [1, 168] = 15.51, p < .001) parenting differed significantly by parent race such that higher levels of positive parenting and lower levels of negative parenting were observed for Caucasian as compared to non-Caucasian parents. Positive (F [1, 168] = 3.07, p < .10) and negative (F [1, 168] = 3.31, p < .10) parenting marginally differed by marital status such that lower levels of positive parenting and higher levels of negative parenting were observed for single parents as compared to two-parent families. Lastly, adolescent age was significantly related to positive (r = −.23, p < .01), but not negative (r = .11, p = .13), observed parenting, such that higher levels of positive parenting were observed for younger adolescents. Thus, when observed positive parenting served as the dependent variable, adolescent age, marital status, and parent race were entered into the first step of the regression analysis as covariates; and when observed negative parenting served as the dependent variable, marital status and parent race were entered into the first step of the regression analysis as covariates.

Primary Analyses

Initially, a hierarchical linear regression analyses was utilized to examine if parent reported positive parenting predicted independently observed positive parenting (controlling for adolescent age, parent race, and parent marital status), and if the relationship was moderated by depressive symptoms (see Table 2). Consistent with bivariate associations, child age and parent race were significantly related to observed positive parenting. Parent marital status was not significantly related to observed positive parenting. All together in block one, demographic variables accounted for 27% of the variance in observed positive parenting (ΔR^2 = .27, p < .001). After accounting for the above covariates, parent-reported positive parenting and parent depressive symptoms were associated with independently observed positive parenting and accounted for an additional 6% of variance (ΔR^2 = .06, p < .01). In the last block, the interaction of parent depressive symptoms by parent reported positive parenting was not significant.

The same three-block hierarchical linear regression analysis was repeated for adolescent reported positive parenting and depressive symptoms (see lower half of Table 2). Holding constant adolescent age, marital status, and parent race (entered in block 1), adolescent-reported positive parenting, but not adolescent depressive symptoms, was significantly related to observed positive parenting and together they uniquely accounted for an additional 13% of the variance in observed positive parenting (ΔR^2 = .13, p < .001). In the final block, the interaction of adolescent depressive symptoms by adolescent reported positive parenting was not significant.

Following the separate parent and child report models, the two models were combined in one model of parent and child reported variables to examine if parent reported and adolescent reported positive parenting each continued to be significant when considered in the context of each other. Results did not differ in regard to significance and magnitude of effects except for parent reported positive parenting in block 2 which, in the context of

adolescent report APQ ($\beta = .32$, $p < .001$), was no longer significantly related to observed positive parenting ($\beta = .04$, $p = .49$).

In the second set of regression analyses, initially parent reported negative parenting served as an independent variable and independently observed negative parenting served as the dependent variable (see top half of Table 3). In block 1, parent race, but not family marital status, was significantly related to observed negative parenting, together accounting for 8% of the variance in observed negative parenting ($\Delta R^2 = .08$, $p < .001$). In block 2, parent depressive symptoms, but not parent-reported negative parenting, was associated with independently observed negative parenting, together accounting for an additional 6% of the variance ($\Delta R^2 = .06$, $p < .01$). In the third block, the interaction of parent reported negative parenting by parent depressive symptoms was significant, accounting for an additional 3% of the variance ($\Delta R^2 = .03$, $p < .05$). The interaction was explicated by plotting the mean value among participants scoring one standard deviation above and/or below the mean, consistent with the recommendations of Cohen and Cohen (1983, p. 323). As is evident in Figure 1, the form of the interaction indicates that, relative to parents with lower levels of depressive symptoms, those with higher levels of such symptoms report negative parenting that is more congruent with independently observed negative parenting (i.e., parent reported negative parenting increased as independently observed negative parenting increased). This finding is consistent with the depression realism hypothesis. It should be noted that parents with BDI scores one standard deviation above (BDI = 31.79) and below (BDI= 6.65) the mean were above the BDI cut-off for significant/severe and within range of low/normal depression, respectively.

In the next regression analysis, adolescent reported negative parenting served as an independent variable and independently observed negative parenting served as the dependent variable (see the bottom half of Table 3). Holding constant marital status and parent race (entered in block 1), adolescent-reported negative parenting, but not adolescent depressive symptoms, was significantly associated with independently observed negative parenting, together accounting for an additional 5% of the variance ($\Delta R^2 = .05$, $p < .01$). In the final block, the interaction of adolescent reported negative parenting by adolescent depressive symptoms was marginally significant and accounted for an additional 2% of the variance in observed negative parenting ($\Delta R^2 = .02$, $p < .10$). Although not reaching the $p < .05$ level of significance, the form of the interaction was explicated to ascertain if it would yield a similar pattern as the significant interaction when parent report was examined. Figure 2, which depicts the interaction, suggests that the findings are not the same as those in Figure 1 when parent report was examined. For adolescents with lower and higher levels of depressive symptoms, adolescent reported negative parenting increased as independently observed negative parenting increased; however, the slope of the lines in Figure 2 indicate that those with lower levels of depressive symptoms reported negative parenting that is more congruent with independently observed negative parenting. This finding is more consistent with the depression distortion hypothesis than the depression realism hypothesis. It should be noted that adolescents with CESD scores one standard deviation above (CESD = 24.7) and below (CESD = 3.22) the mean were above and below the CESD clinical cut-off for depression ($M = 16$), respectively.

Following the parent and child report models predicting observed negative parenting, the two models were combined in one model of parent and child reported variables to examine if adolescent reported parenting continued to be significant in the context of parent reported negative parenting (which was not significant in the parent report model). Significance of first-order effects in block 2 was reduced: parental depressive symptoms ($\beta = .13$, $p = .10$) and adolescent reported negative parenting ($\beta = .11$, $p = .17$) were no longer significant. The

parent report interaction continued to be significant ($p < .01$) but the marginally significant adolescent report interaction was reduced ($p = .08$ to $p = .17$).

Discussion

The findings of the current study address two important questions in families where a parent has a history of depression. First, when using direct observations by trained raters as an "ideal criterion measure" (Taber, 2010, p. 1001) of parenting, are parent and adolescent reports congruent with this outcome and, if so, is parent or adolescent report more predictive? Second, are the data more consistent with the depression→distortion hypothesis (Richters, 1992) or the depressive realism hypothesis (Alloy & Abramson, 1979, Moore & Fresco, 2012)? The answer to both questions is not simple.

Regarding the reporter congruence question, both correlational and regression analyses, controlling for relevant demographic variables, indicated significant associations between parent and adolescent reports with independent observations of both positive and negative parenting. However, with the exception of adolescent report of positive parenting, the associations were relatively modest. Furthermore, any conclusions are qualified by both the type of parenting considered (positive vs. negative) and level of parent or adolescent depressive symptoms. When positive parenting is considered, adolescent report is more congruent with independent observations than parent report regardless of level of depressive symptoms; adolescent report accounted for over six times as much variance in independent observations than did parent report (19% vs. 3%) and was significant when both were entered into the same model. When negative parenting is considered, the reports of adolescents with lower levels and parents with higher levels of depressive symptoms were more congruent with independent observations.

Regarding the depressive realism (Alloy & Abramson, 1979; Moore & Fresco, 2012) and depression→distortion (Richters, 1992) hypotheses, some support for *each* hypothesis emerged for negative, but not positive, parenting when using independent observations as the criterion measure. For parents with higher levels of depressive symptoms, self-report of parenting mapped linearly onto independent observations; at lower levels of depressive symptoms, parent-reported negative parenting was not congruent with observed levels of this type of parenting. These findings provide support for the depressive realism hypothesis. In contrast, although at a marginal level of significance, adolescent report of their parent's negative parenting appeared to map more linearly onto independent observations at lower, relative to higher, levels of adolescent depressive symptoms. These findings, which should be viewed as tentative because of the significance level of the interaction and because differences in the slopes are not as substantial as seen in the parent report model (Figure 1), suggest more support for the depression → distortion hypothesis than the depressive realism hypothesis. In sum, who served as the reporter (parent or child) was important in determining which hypothesis received some supported.

One explanation for the discrepant findings between parent and adolescent report of negative parenting was recently offered by Moore and Fresco (2012). Non-depressed individuals demonstrate a bias in the perceptions of their own, but not others', performance whereas depressed individuals display realistic perceptions of their own, but not others', performance. Extrapolating to our findings, parents are evaluating their own parenting skills. As such, parents with higher levels of depressive symptoms "accurately" reported their negative parenting. In contrast, adolescents are evaluating the parenting skills of another person, and as such, adolescents with lower levels of depressive symptoms "accurately" reported on their parents' negative parenting.

Three additional findings deserve comment. First, as noted in the Results section, some of the parents, all of whom had a history of depression, currently had BDI scores in the low/normal range of depression whereas other parents were above the cut-off for significant/severe depression. This range of parental depressive symptoms is important to remember when interpreting the findings, particularly since BDI scores were correlated with observed positive and negative parenting in the expected directions. Second, as adolescents increased in age, observed positive parenting decreased. This finding is congruent with a long-standing literature indicating that as adolescents age into and through the teenage years, parenting and parent-adolescent relations become increasingly difficult (e.g., Montemayor, 1986). Third, parents and adolescents had greater agreement for their reports of negative (r = .59) than positive (r = .25) parenting. The strong correlation for reports of negative parenting is interesting in that both parent and adolescent reports of negative parenting correlated at a substantially lower level (r = .27 and r = .25, respectively) with observed negative parenting. These findings may reflect a method effect (i.e., two questionnaire reports of parenting correlate higher than questionnaire reports with behavioral observations) or that the questionnaire reports of parenting are reflecting negative behaviors that are not manifested in a relatively brief laboratory interaction.

The current study had several limitations that should be considered when evaluating the findings. First, we utilized direct observations of parenting behaviors from a relatively brief interaction in an analogue situation as the “ideal criterion measure” (Taber, 2010, p. 1001). More naturalistic observations of longer length may have yielded different findings. However, even under these conditions, observer effects can impose limits on conclusions which can be reached. Furthermore, questionnaire data regarding parenting, like observational data, have both weaknesses and strengths (see Kazdin, 2003, for a discussion). Second, our assessment of parent and adolescent reports of parenting was restricted to subscales from one parenting scale that did not map perfectly onto the observed constructs. Different questionnaire items may have yielded different findings. Third, the adolescents and parents in this study represented a unique sample in that, as delineated in the participant section, they were selected for a prevention study based on the absence of certain diagnoses. Therefore, the findings for adolescent report may not generalize to other samples where adolescents or parents have one of the excluded diagnoses (e.g., bipolar I, schizophrenia). Fourth, the focus of this study was on parenting; however, it is important to acknowledge in interpreting the findings that positive and negative parenting will be determined in part by adolescent behavior (e.g., Patterson, 1982). And, finally, as has been noted, the interaction of adolescent depressive symptoms and adolescent report of negative parenting should be interpreted with caution because of the marginal significance level.

The current study also had a number of strengths. First, the sample was relatively large and selected on a characteristic of the parents being studied: a history of MDD. As we noted earlier, this selection criterion diminishes floor effects that occur when studying parent depressive symptoms but selecting participants based on adolescent characteristics (e.g., at risk or clinic-referred). Second, our assessments of parenting occurred in a time-restricted sequence congruent with the hypotheses examined (i.e., parent and adolescent report of parenting forecasting independently observed parenting). Third, this is the first study to address the question of the congruence of parent versus adolescent report with direct observations of parenting.

The findings of the current study have several practical implications for the assessment of parenting in families living with a parent with a history of depression when observations are not possible. First, as De Los Reyes and colleagues (2008) have noted in their work on depression and informant discrepancies on rating of parenting, it is important to assess the perspective of both informants (parent and child). The current study, using independent

observations as the criterion measure, suggests that adolescent report of positive parenting is particularly important to include, as it is more highly related to direct observations of positive parenting than is parent report. When negative parenting is the target of assessment, both parent and adolescent reports of negative parenting are important to include because severity of depressive symptoms appears to influence the accuracy of reports of negative parenting by parents and adolescents but in opposite directions: Elevated depressive symptoms are more congruent with direct observations of negative parenting for parents and less congruent for adolescents. These findings echo conclusions reached earlier by De Los Reyes et al. (2008) about the importance of clinicians and reporters considering the contributions of depressive symptoms of the reporter and by Morsbach and Prinz (2006) who point out that multiple reporters will provide the most accurate information about parenting as each provides a unique perspective. Finally, as Achenbach (2011) has noted recently, multi-informant assessment can be tailored and utilized by clinicians to help meet the needs of *individual* families, adolescents, and parents. The conclusions by all of these investigators are particularly relevant when working with families with a parent who has a history of depression. Finally, future research should further examine the principles and practices underlying the use of multiple informants and multiple methods of parenting assessment as well as examining meaningful correlates of discrepancies or convergence between multiple informants' and/or methods.

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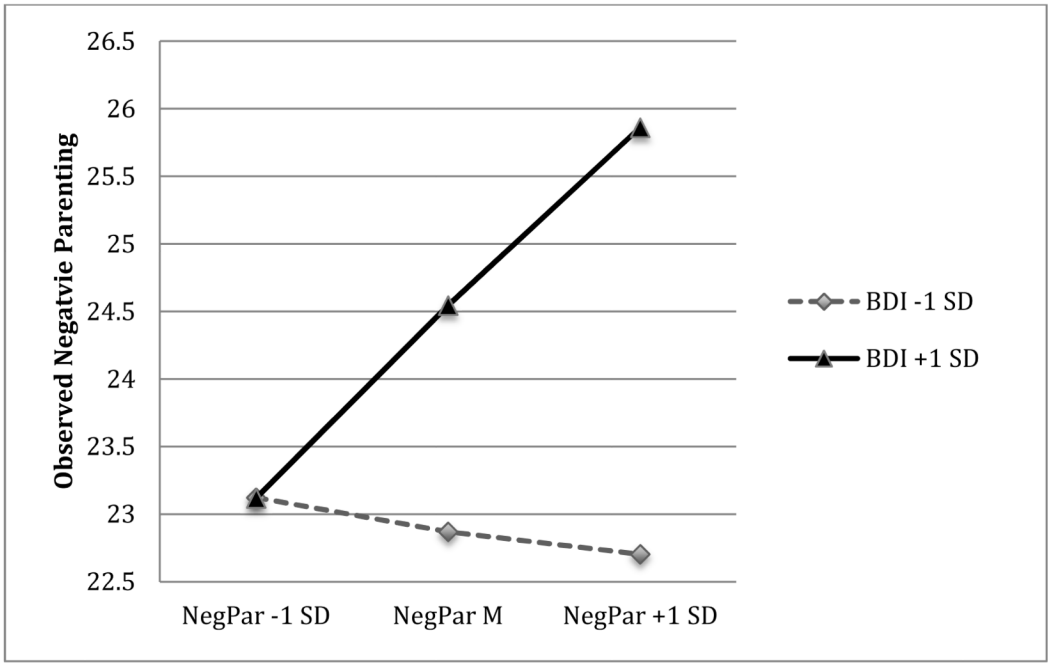

Figure 1.
Parent-reported Negative Parenting by Parent Depressive Symptoms Predicting Observed Negative Parenting.

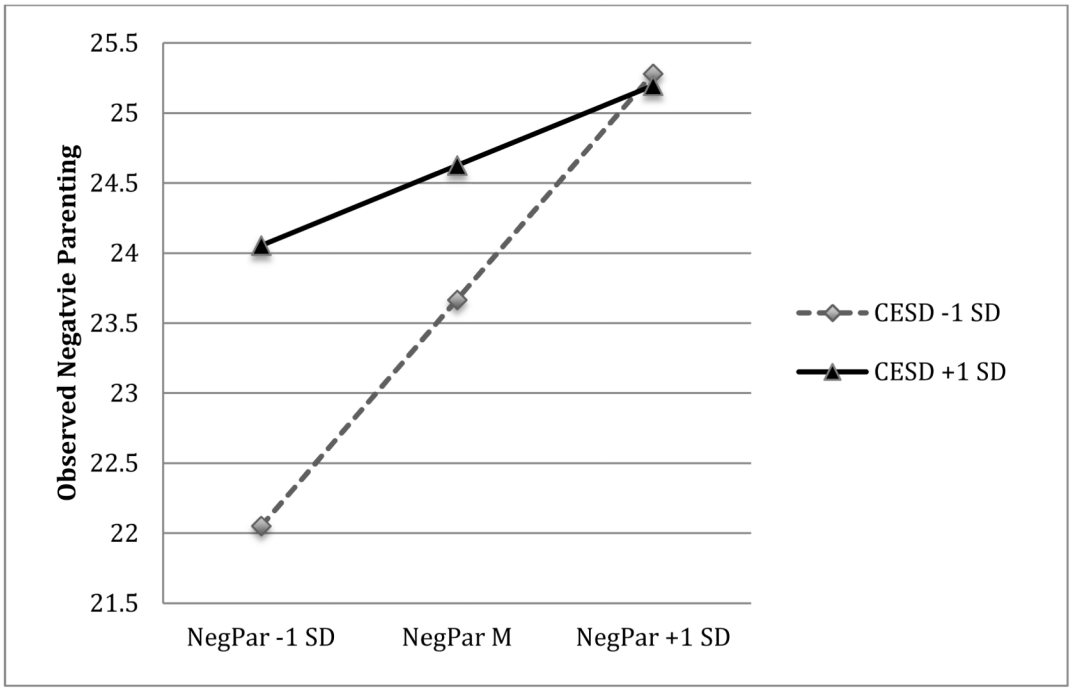

Figure 2.
Adolescent-reported Negative Parenting by Adolescent Depressive Symptoms Predicting Observed Negative Parenting.

Table 1
Descriptive Data and Bivariate Correlations Among Study Variables

	Variables	M (SD)	2	3	4	5	6	7	8
1	Observed Positive Parenting	27.86 (4.93)	−.67**	.22**	.46**	−.44**	−.19*	−.26**	−.28**
2	Observed Negative Parenting	23.97 (5.38)	---	−.04	−.28**	27**	.25**	.19*	.26**
3	APQ Positive Parenting (P)	61. 57 (8.97)		---	.25**	−.34**	−.08	−.02	−.13
4	APQ Positive Parenting (A)	56.77 (12.47)			---	−.31**	−.10	−.23**	−.11
5	APQ Negative Parenting (P)	17.90 (5.09)				---	.59**	.33**	−.02
6	APQ Negative Parenting (A)	15.87 (5.26)					---	.22**	.35**
7	CESD (A)	13.96 (10.74)						---	.09
8	BDI (P)	19.22 (12.57)							---

Note.

P = parent report. A = adolescent report. N = 180. APQ = Alabama Parenting Questionnaire; BDI = Beck Depression Inventory; CESD = Center for Epidemiological Studies Depression Scale

* $p < .05$;

** $p < .01$.

Table 2
Multiple Regression Analyses Predicting Independent Observations of Positive Parenting

	ΔR^2	β	*t*	*p*
Parent-Report				
Block 1	.27			
Adolescent Age		−.21	−3.2	.001
Marital Status		−.02	−.23	.822
Parent Race		−.46	−6.7	.000
Block 2	.06			
APQ-Positive Parenting		.14	2.2	.03
BDI		−.18	−2.6	.01
Block 3	.01			
Positive Parenting X BDI		.08	1.4	.167
Adolescent-Report				
Block 1	.27			
Adolescent Age		−.21	−3.2	.001
Marital Status		−.02	−.23	.822
Parent Race		−.46	−6.7	.000
Block 2	.13			
APQ-Positive Parenting		.34	4.8	.000
CESD		−.09	−1.4	.157
Block 3	.00			
Positive Parenting X CESD		.02	.10	.920

Note: N = 180; variables added in each block are presented. APQ = Alabama Parenting Questionnaire;BDI = Beck Depression Inventory; CESD = Center for Epidemiological Studies Depression Scale

Table 3

Multiple Regression Analyses Predicting Independent Observations of Negative Parenting

	ΔR^2	β	*t*	*p*
Parent-Report				
Block 1	.08			
Marital Status		.07	.87	.385
Parent Race		.26	3.5	.001
Block 2	.06			
BDI		.18	2.2	.026
APQ-Negative Parenting		.12	1.5	.148
Block 3	.03			
Negative Parenting X BDI		.16	2.2	.027
Adolescent-Report				
Block 1	.08			
Marital Status		.07	.87	.385
Parent Race		.26	3.5	.001
Block 2	.05			
CESD		.08	.98	.329
APQ-Negative Parenting		.19	2.2	.027
Block 3	.02			
Negative Parenting X CESD		−.13	−1.7	.082

Note: N = 180; variables added in each block are presented. APQ = Alabama Parenting Questionnaire;BDI = Beck Depression Inventory; CESD = Center for Epidemiological Studies Depression Scale