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Parenting Specificity An Examination of the Relation Between Three Parenting Behaviors and Child Problem Behaviors in the Context of a History of Caregiver Depression

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Abstract

The aim of this study was to advance our understanding of the relations between three specific parenting behaviors (warmth, monitoring, and discipline) and two child outcomes (internalizing and externalizing problems) within the context of parental depression. Using an approach recommended by A. Caron, B. Weiss, V. Harris, and T. Carron (2006), unique and differential specificity were examined. Ninety-seven parents with a history of depression and 136 of their 9- to 15-year-old children served as participants. Children reported parenting behaviors and parents reported child problem behaviors. The findings indicated that warmth/involvement, but not monitoring or discipline, was uniquely related to externalizing problems and differentially related to internalizing and externalizing problems. The findings suggest that parental warmth has implications for interventions conducted with children living in families with a history of parental depression.

Keywords

parenting specificity; parental depression; internalizing problems; externalizing problems

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Worldwide, unipolar major depressive disorder (MDD) is recognized as one of the leading causes of disease-related disability and is predicted to account for more burden of disease than any other illness by 2020 (Murray & Lopez, 1997). In the United States, MDD is estimated to strike one in five people in the general population during their lifetime (Kessler et al., 1994), with a higher risk conferred on women (Kendler & Prescott, 1999). Several large-scale epidemiological studies conducted during the past two decades present lifetime prevalence rates of MDD ranging from 6% to 17% (e.g., Hassin, Goodwin, Stinson, & Grant, 2005; Kessler et al., 2003). Furthermore, longitudinal data suggest that MDD is highly recurrent, with approximately 75% to 85% of individuals experiencing more than one episode (Belsher & Costello, 1998).

Individuals who experience depression suffer emotionally, physically, and financially. However, the debilitating effects of depression are not limited to the individuals diagnosed: spouses and children are also exposed to the symptoms of parental depression. A literature amassed over the past 30 years indicates that children and adolescents living with depressed caregivers are at a substantial risk for a variety of developmental and adjustment difficulties from infancy through adulthood (Downey & Coyne, 1990). For example, offspring of depressed caregivers are 6 times more likely to be diagnosed with MDD (Downey & Coyne, 1990) and 2 to 5 times more likely to experience externalizing disorders than children of nondepressed parents (Cummings & Davies, 1994).

In the last decade, the focus has begun to shift from establishing risk of parental depression to exploration of the mechanisms of transmission of such risk. Among the factors responsible for predisposing children of depressed parents to abnormal development is difficulties in parenting (Goodman & Gotlib, 1999). The deficits in positive affect and excesses in negative affect characteristic of depression (see Lovejoy, Graczyk, O'Hare, & Newman, 2000) can lead to difficulties in each of three primary categories of parenting (Rapee, 1997): (a) warmth/involvement, (b) control (e.g., monitoring/supervision), and (c) effective discipline and firmness. In the general parenting literature, deficits in these parenting behaviors have been found to be associated with increased levels of externalizing problems (see Capaldi, Chamberlain, & Patterson, 1997; McKee, Colletti, Rakow, Jones, & Forehand, in press; McMahon, Wells, & Kotler, 2006, for reviews) and internalizing problems (see McKee et al., in press; McLeod, Wood, & Weisz, 2007, for reviews). Similarly, in the parental depression literature, relations have been reported between parenting behaviors and, to some extent, externalizing and internalizing problems of youth (see McKee et al., in press, for a review).

As is the case with the general parenting literature, there is now a need to examine *specificity* of parenting among depressed caregivers—that is, how particular parenting dimensions, such as discipline, relate to particular child outcomes (e.g., internalizing vs. externalizing problems). O'Connor (2002) has emphasized that parenting is naturally embedded in a multitude of layered contexts (e.g., families, social systems, cultures, and subcultures). As a result, parenting is most effectively studied when the effects of specific contextual variables are considered; parental depression is one such proximal context. Conclusions about the effects of parenting by depressed caregivers on child outcome may differ from conclusions drawn from the general parenting literature, suggesting that depression as a *context* may be important to examine.

The study of parenting specificity in families with a depressed caregiver is critical for at least two reasons. First, until conclusions can be reached regarding the relations between specific parenting behaviors and specific child outcomes, an integration of findings regarding parenting and child outcomes into a cohesive framework cannot occur. As a consequence, it is not possible to advance to the next stage of research, namely, the

delineation of conceptual or theoretical models that lead to the identification of mechanisms that explain the relation between parenting by depressed caregivers and child outcome. At the current stage of research development, the field is defined by a catalogued list of isolated relationships that are not threaded together by an overarching framework.

The second reason specificity is critical to the study of parenting and child outcome in the context of depression is that this research can guide the selection of parenting behavior(s) to include in prevention or intervention programs for particular child problem behaviors (e.g., internalizing problems); only after conceptual clarity has been established can prevention and intervention programs be appropriately targeted. Unfortunately, this targeted approach is rare. In a recent review, McKee et al. (in press) failed to identify any studies addressing the specificity of parenting in the parental depression literature. In order to reach some tentative conclusions, McKee and her colleagues examined 15 studies in which a parenting behavior was correlated with each of two child outcomes: internalizing and externalizing problems. They examined correlations between each of several parenting behaviors and each of the two child outcomes. Although not controlling for third variables (e.g., co-occurring child psychopathology), correlations allow an initial examination of differential associations of each parenting behavior with each of two child outcomes. Little support emerged for specificity.

Caron, Weiss, Harris, and Catron (2006) recently recommended three more sophisticated approaches for studying specificity of parenting: (a) unique effects, (b) differential effects, and (c) interactive effects. Unique, or direct, effects focus on whether a variable (e.g., maternal warmth/involvement) retains a significant relation with another variable (e.g., child internalizing problems) once indirect relations through other variables (e.g., child externalizing problems and/or caregiver behavioral control) are controlled. Differential effects focus on whether a parenting variable has a differential relation with two child outcomes (e.g., parental discipline is more strongly related to child internalizing than child externalizing behaviors). The third approach is in the form of interaction tests, which examine whether one variable is related to a third variable across all levels of a second variable or only at particular levels of that second variable. For example, does caregiver warmth/involvement relate to lower levels of adolescent externalizing problems only when parental control is occurring (specificity) or independent of level of behavioral control (nonspecificity)?

In two recent studies examining children of nondepressed parents, Caron et al. (2006) and Jones et al. (in press) both found some support for specificity. However, parenting variables for which specificity emerged differed in the two studies. Caron et al. found support for specificity of behavioral control (i.e., monitoring) but not warmth/involvement, as the former variable was uniquely and differentially associated with internalizing and externalizing problems of children. Behavioral control was related to lower levels of externalizing problems *but* higher levels of internalizing problems. In contrast, Jones et al. found support for the specificity of warmth/involvement but not behavioral control as the former parenting variable was uniquely associated with externalizing problems in a negative direction and differentially associated with internalizing and externalizing problems. Efforts to draw conclusions about parenting specificity are hindered by the dearth of empirical studies focused on specificity and the inconsistent findings of the research available (Caron et al., 2006; Jones et al., in press). Furthermore, making meaning of the two available specificity studies is hampered by different samples, informants and assessments of parenting behaviors, and, as we have noted, their relevance to the study of specificity in the context of parents who have experienced depression is limited (O'Conner, 2002).

The purpose of this study was to advance our understanding of the relation between specific parenting behaviors and two child outcomes, internalizing and externalizing symptoms, *within the context of parental depression*. The current study examined a parenting behavior from each of the categories of parenting noted earlier (warmth/involvement, parental control/supervision, and discipline; Rapee, 1997) and two child outcomes: internalizing problems and externalizing problems. Based on the findings of Caron et al. (2006) indicating unique and differential specificity for behavioral control (e.g., monitoring) and the findings of Jones et al. (in press) indicating unique and differential specificity for warmth/involvement, we hypothesized that support would emerge for both types of specificity. Specifically, we expected warmth/involvement and parental control (i.e., monitoring) to relate uniquely to externalizing problems (lower levels of warmth/monitoring would be associated with higher levels of externalizing problems) and differentially for externalizing versus internalizing problems (i.e., stronger associations for lower levels of externalizing than internalizing problems). As neither Caron et al. (2006) nor Jones et al. (in press) examined discipline, we offer no hypotheses for the specificity of this parenting variable with externalizing versus internalizing problems.¹

We studied children in the 9- to 15-year-old age range in the current study for several reasons. First, this is the age range during which one subset of internalizing problems, depressive symptoms, are most likely to emerge (see Hammen & Rudolph, 2003). Second, in terms of externalizing problems, this is an important age period for parents to demonstrate not only warmth/involvement but behavioral control (i.e., monitoring) and consequences (i.e., effective discipline) for inappropriate behavior in order to prevent the progression to more serious acting-out difficulties (see McMahon et al., 2006). Third, as we were interested in utilizing independent reporters (i.e., parent and child reports) of parenting and child problem behaviors to avoid shared method variance, we focused on 9- to 15-year-olds and eliminated concern about younger children completing measures assessing either of these constructs (e.g., Shelton, Frick, & Wooten, 1996).

Method

Participants

The sample consisted of 97 caregivers (84 mothers; $M_{age} = 42.25$ years; $SD = 7.62$) who had a history of major depressive disorder (MDD) and their 136 offspring (69 female; $M_{age} = 11.46$ years; $SD = 1.94$) who fell within the age range of 9 years to 15 years 11 months (see Table 1). Participants were recruited from Burlington, Vermont, and Nashville, Tennessee, and surrounding areas to participate in a cognitive-behavioral family-based intervention program for the prevention of mental health problems among children who had a parent with a history of depression. The participating target parents were largely Caucasian (82.5%), relatively well educated (83.4% report at least some college), and married or living with a partner in two thirds of the families. Both mothers and fathers (86.6% and 13.4%, respectively) identified as the target parent were included as research indicates that outcomes for children and adolescents are very similar (Kane & Garber, 2004). In addition, 35 target parents had multiple children in the targeted age range; all children within that range were included in analyses. Finally, an additional 17 parent-child dyads were not included in the present sample because of missing data on one or more of the key variables

¹We do not examine specificity tested through interactional terms as proposed by Caron, Weiss, Harris, and Catron (2006) for two reasons. First, this approach appears to be a less direct test of specificity than either the unique or differential approaches. Second, significant interactions of parenting variables have rarely emerged in the general parenting literature (for a review, see McKee, et al., in press), suggesting this approach is not a sensitive one for detecting effects, at least partially due to the power required for significant interactions to emerge.

being examined (e.g., a parenting behavior, a child outcome). All data for the proposed study were drawn from the preintervention (baseline) assessment.

Interviewers

Interviewers, who administered the Structured Clinical Interview for *DSM-IV-TR* Axis I Disorders, Research Version, Patient Edition (SCID-I/P; First, Spitzer, Gibbon, & Williams, 2001) and the Kiddie-Schedule for Affective Disorders and Schizophrenia for School Aged Children, Present and Lifetime Version (k-SADS-PL; Kaufman, Birmaher, Brent, Rao, & Ryan, 1996), underwent approximately 25 hours of training. The training included the following steps: (a) a detailed overview of both instruments followed by practice with a previously trained and reliable interviewer, (b) listening to and scoring of a previously administered interview, (c) resolution of any discrepancies from the original scoring of that interview by a master trainer, (d) a reliability check achieved by administering an interview to a community parent and/or child, (e) resolution of discrepancies through discussion between the interviewer and master trainer, and (f) mandatory interviewer refresher meetings on a bimonthly basis to prevent interviewer drift.

Reliability checks conducted in approximately 20% of the interviews resulted in adequate agreement. For example, for each of the SCID-I/P diagnostic categories of interest, the percent agreement was .90 and higher (100% in 55% of the categories). The kappa coefficient was above .60 (reflecting substantial agreement; Landis & Koch, 1977) for all primary categories of interest.

Measures

Eligibility criteria—The SCID-I/P (First et al., 2001) was used to screen parents for a history of major depressive disorder (during the target child's lifetime) and the absence of a lifetime history of bipolar I disorder and schizophrenia. Adequate reliability and validity for the SCID-I/P has been established for each of the *DSM-IV* diagnoses of interest (e.g., Skre, Onstad, Torgersen, & Kringlen, 1991; Zanarini et al., 2000).

The k-SADS-PL (Kaufman et al., 1997) was used to determine eligibility of children. Child and parent report of the child's symptom count for current depression, bipolar I disorder, schizophrenia, current substance abuse, and current or lifetime conduct disorder were collected. The higher of the two scores was used to measure symptoms in each diagnostic category and to exclude a participant when a diagnostic criterion was met. Adequate reliability and convergent and discriminant validity have been established (Kaufman et al., 1997).

Demographic information—Demographic variables were reported by the child (child age and gender) and by the parent (parental age, gender, ethnicity, marital status, level of education, and household income). Parental level of education was assessed via a self-report form on which 0 = *No school*; 1 = *Less than seven years of school*; 2 = *Junior high school (7th, 8th, 9th)*; 3 = *Some high school (10th, 11th)*; 4 = *High school graduate (include equivalency exam)*; 5 = *Some college or technical school (at least one year)*; 6 = *College graduate*; and 7 = *Graduate professional training (Master's or above)*. Household gross yearly income was assessed via a self-report form on which 1 = *Under \$5,000*; 2 = *\$5,000–\$9,999*; 3 = *\$10,000–\$14,999*; 4 = *\$15,000–\$24,999*; 5 = *\$25,000–\$39,999*; 6 = *\$40,000–\$59,000*; 7 = *\$60,000–\$89,000*; 8 = *\$90,000–\$179,000*; 9 = *Over \$180,000*.

Parental depressive symptoms—The Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996), is a 21-item self-report inventory that assesses the presence and severity of current depressive symptoms in adults. Each item consists of four

statements of varying degrees of symptom severity and ranges from 0 to 3, with 0 indicating an absence of that particular symptom and 3 indicating the most severe level of that symptom. Ratings from the 21 items are then summed to calculate a total score ranging from 0 to 63, with higher scores indicating more severe current depressive symptoms. The BDI-II has excellent internal consistency ($\alpha = .92$) and correlates highly with other measures of depression ($r = .93$; Beck, Steer, Ball, & Ranieri, 1996). Suggested categories for the BDI-II include 0 to 13, minimal depression; 14 to 19, mild depression; 20 to 28, moderate depression; and 29 to 63, severe depression (Beck et al., 1996). The alpha coefficient for the current sample was .92.

Parenting—To reduce inflated associations due to shared method variance, children reported on parenting behavior and parents reported on child problem behaviors. Preadolescents and adolescents are generally regarded as reliable reporters of parenting behavior (e.g., Brennan, LeBroque, & Hammen, 2003; Jacob, Moser, Windle, Loeber, & Stouthamer-Loeber, 2000; Schaefer, 1965).

The Alabama Parenting Questionnaire (APQ; Frick, 1991) was used to assess child-reported parenting behaviors from three categories (Rapee, 1997): warmth/involvement, control (i.e., monitoring), and discipline. The measure consists of 35 items (after deleting redundant items; Shelton et al., 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 ($r = .41-.85$; $M = .67$) and because the three-item Corporal Punishment construct has low internal consistency ($\alpha = .49$; 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 (e.g., praises, attends school meetings, helps with homework); Deficient Monitoring (e.g., child out with friends unknown to parent, child comes home one or more hours late), and Ineffective Discipline (e.g., threatens to punish but does not, lets child out of punishment early). As this factor structure is consistent with the three primary categories of parenting identified by Rapee (1997; i.e., warmth/involvement, control [i.e., monitoring], and discipline [i.e., ineffective discipline]), we derived our three parenting scales based on Hinshaw et al. (2000). However, the three corporal punishment items, which had a low internal consistency score when forming a separate subscale (Sheldon et al., 1996), were not included in the discipline construct as our focus was on ineffective, not negative, discipline, which is a primary parenting deficit associated with externalizing problems (Capaldi et al., 1997). Possible values for parental warmth/involvement ranged from 24 to 80 ($\alpha = .90$), with higher values indicating more warmth/involvement; possible values for deficient monitoring ranged from 8 to 40 ($\alpha = .60$), with higher values indicating *less* monitoring; and possible values for ineffective discipline ranged from 8 to 40 ($\alpha = .61$), with higher values indicating *less* effective discipline.

Child internalizing and externalizing problems—The Child Behavior Checklist for Ages 6–18 (CBCL/6–18; Achenbach & Rescorla, 2001), a 118-item measure that assesses child behavioral and emotional problems over the last 6 months, was completed by the parent. Each item was rated on the following scale for his or her child during the past 6 months: 0 (*not true*), 1 (*somewhat or sometimes true*), or 2 (*very or often true*). The CBCL/6–18 yields two broad-based factors, Internalizing and Externalizing, both of which were used in this study. The CBCL/6–18 has excellent internal consistency ($\alpha = .90$ for

internalizing problems, and $\alpha = .93$ for externalizing problems), has national norms, and correlates highly with other measures (i.e., Behavioral Assessment System for Children; Kamphaus, Reynolds, Hatcher, & Kim, 2004) of broadband total problem scales ($r = .75-.83$; Achenbach & Rescorla, 2001).

Procedure

Participants were recruited through a variety of sources, including mental health agencies, doctor's offices, and hospitals; advertisements in local newspapers, television, and radio; and flyers. All prospective participating parents were initially screened with a diagnostic phone interview. After meeting initial eligibility criteria on the phone screen, parents and their child or adolescent were invited to come to a local university to sign consent and assent forms and take part in the baseline assessment. At this in-person assessment, graduate research assistants determined their final eligibility status. This assessment included the SCID-I/P with the parent (SCID-I/P; First et al., 2001) and the k-SADS-PL first with the child or adolescent and then separately with the parent (k-SADS-PL; Kaufman et al., 1997).

Children and adolescents then completed a battery of online questionnaires including the APQ, and parents also completed online questionnaires including the CBCL and BDI-II. In families with more than one child in the 9- to 15-year age range, all baseline procedures were repeated for each child. Families were compensated for their participation in the baseline phase of the study (\$40 per participating child and \$40 per target parent).

Results

Preliminary Analyses

Zero-order correlations were first computed to assess the relation between demographic variables (see Table 1) and the two child outcome measures (externalizing and internalizing symptoms). Because of the nested nature of the data, all correlations were computed only after cases had been weighted. For example, when correlating target parent education and child internalizing problems in a family with three participating children, the value for education was weighted at 1/3. No statistically significant relations between demographic and criterion variables emerged; as a result, the primary analyses do not include demographic variables.

Table 2 presents correlations between predictor and criterion variables. A positive relation emerged between parental ineffective discipline and child externalizing symptoms ($r = .19$; $p < .05$). In addition, parental warmth was significantly correlated with externalizing symptoms in an inverse direction ($r = -.29$; $p < .01$) but was not correlated with internalizing problems ($r = .01$). Other relations between parenting behaviors and child outcomes were not significant. As expected, a strong positive relation emerged between parental report of child internalizing and externalizing symptoms ($r = .49$; $p < .01$).

Primary Analyses

Because multiple children from the same family were included in the data analyses, a Linear Mixed Models Analysis was used in SPSS to examine the relation between child-reported parenting dimensions and parent-reported child outcomes. Linear Mixed Models Analysis accounts for the family correlational structure by assuming a compound symmetry covariance structure and using an iterative, or repeated measures, procedure to estimate parameters of the model. In this way, the analyses account for the assumed correlations between parental outcome measurements on children in the same family and children from the same family reporting on parenting dimensions (A. Howard, personal communication, May 2, 2007; Howell, 2007). There are no fixed between-subjects effects, only covariates.

To address the aims of the study, two separate sets of mixed models analyses were conducted. Child externalizing symptoms served as the dependent variable in one analysis, and child internalizing problems served as the dependent variable in the second analysis. In both sets of analyses, Model 1 consisted of the following variables: BDI-II to account for the context of parental current depressive symptoms, and co-occurring child problem behaviors (internalizing symptoms when the dependent variable was externalizing symptoms and externalizing symptoms when the dependent variable was internalizing symptoms) to examine unique relations between parenting and child outcome. Model 2 consisted of the variables in Model 1 plus the three parenting behaviors of interest (warmth/involvement, ineffective discipline, and deficient monitoring). Including the three parenting behaviors allowed for the unique relation between each parenting behavior and each child outcome to be examined.

The results of the regression analyses are presented in Table 3 for externalizing problems and in Table 4 for internalizing problems. To examine unique effects, each of the parenting behaviors in Model 2 should be examined. Warmth/involvement, but not ineffective discipline or deficient monitoring, evidenced a unique relationship with externalizing (Table 3) and internalizing (Table 4) problems. Higher levels of warmth/involvement were associated with lower levels of externalizing problems and higher levels of internalizing problems. As the zero-order correlation for warmth/involvement and internalizing problems was nonsignificant ($r = .01$), the findings for internalizing problems represent a classical suppression effect (Cohen, Cohen, West, & Aiken, 2003).

To determine whether each parenting behavior was *differentially* related to externalizing problems versus internalizing problems, Linear Mixed Models Analysis was again used to test the association between the three parenting behaviors and the profile effect (the difference between internalizing and externalizing symptoms; see Caron et al., 2006; Weiss, Susser, & Catron, 1998). This within-subjects test measured whether each parenting variable was significantly related to the contrast of externalizing and internalizing problems; a significant relation would suggest a differential relation to the two outcome measures of interest (internalizing and externalizing symptoms). Only parental warmth ($\beta = .27$; $p < .01$) was a significant predictor of the contrast. Interpretation of the significance is complicated by the fact that the criterion variable is a difference score. Returning to unique specificity analyses (see Table 3 and Table 4), the results indicate that the relation of warmth to internalizing ($B = .14$) and externalizing ($B = -.23$) symptoms is not only substantially different but in the opposite direction. Again, however, we note the likelihood of a suppression effect with regard to the warmth/internalizing relation.

Discussion

Although the literature has borne out the relations between parenting behaviors and externalizing and internalizing problems of children in the context of a history of parental major depression, the specificity of a parenting behavior to a child outcome has not been examined. The current study examined three parenting behaviors, warmth/involvement, ineffective discipline, and deficient monitoring; and two child outcomes, externalizing and internalizing problems. The hypotheses proposed regarding specificity were partially supported, as one parenting behavior, warmth/involvement, was uniquely related to externalizing problems and differentially related to externalizing versus internalizing problems.

The central role of parental warmth/involvement in a supportive parent-child relationship is not disputed (Masten & Coatsworth, 1998). A number of studies in the general parenting literature have documented a negative relation between warmth/involvement and child

externalizing symptoms (for a review, see McKee et al., in press). In the behavioral parent training literature, this variable has been included as a critical component of parenting interventions for children and adolescents exhibiting externalizing problems (McMahon et al., 2006). Within the depressed parenting literature, some support has also emerged for a significant negative relation between parental warmth/involvement and child externalizing symptoms (for a review, see McKee et al., in press); however, none of the existing studies examined warmth when statistically controlling for other parenting (monitoring and discipline) and child (internalizing symptoms) variables.

The current findings, generated within a rigorous specificity framework, provide further evidence for the association of parental warmth/involvement with child externalizing problems. In comparison to the two studies that have examined specificity (albeit not in the context of parental depression), the present study's findings are contrary to the guiding work of Caron and colleagues (2006) but congruent with recent work by Jones et al. (in press). In the latter investigation, conducted with inner-city African American single mothers and children, Jones and colleagues reported that when considered in the context of each other, warmth/involvement but not monitoring was uniquely related to child externalizing symptoms.

One mechanism proposed to explain the association between parental warmth/involvement and child externalizing problems focuses on the child's ability to regulate arousal (Tronick, 1989). Parenting characterized by low levels of support, warmth, and involvement interferes with a child's capacity to modulate and regulate arousal (Tronick, 1989); as a result, a child may be less capable of considering the consequences of his or her actions and refraining from problematic, acting-out behaviors (Brody, Dorsey, Forehand, & Armistead, 2002). This proposed mechanism, however, has not yet been considered within the context of parenting specificity. As such, the ways in which warmth/involvement operates to regulate arousal, in the context of monitoring and discipline, deserves further attention.

When the unique specificity of parental warmth/involvement in the prediction of child internalizing symptoms was examined, an unexpected relationship emerged. Although warmth was not related to internalizing problems in the correlational analyses, it was positively related to such problems in the Mixed Linear Model analysis. As we have noted, this finding is consistent with what has been termed a classical suppression effect (Cohen et al., 2003). There is a long history of skepticism about suppressor variables (e.g., Wiggins, 1973). The skepticism is particularly warranted with the current findings as warmth has been negatively, not positively, related to internalizing problems in the literature when significant relationships do emerge between these two variables (see McKee et al., in press). Furthermore, in the correlational analyses, internalizing and externalizing problems were highly and positively correlated ($r = .49$) and warmth/involvement was significantly related to externalizing, but not internalizing, problems. In light of these findings, the emergence of warmth relating significantly to internalizing and externalizing problems in opposite directions in the Mixed Linear Model analyses is puzzling. Because of the absence of a relationship between warmth/internalizing problems in the correlational analyses, the general consensus regarding caution in the interpretation of suppression effects, the inconsistency of the finding with the existing literature, and the emergence of different relations between warmth/internalizing versus externalizing problems when the latter two variables are positively correlated, we believe the current finding of a positive relation between warmth/involvement and internalizing problems is likely spurious, and attempts to interpret it should not be undertaken.

Not surprisingly, when considered in the context of significant relation in opposite directions between warmth/involvement and externalizing versus internalizing problems, warmth/

involvement was differentially related to these two child outcomes. That is, warmth/involvement was related to the contrast (the difference between) internalizing and externalizing problems. This differential association provides further evidence for the specificity of warmth/involvement as a parenting variable; analyses examining unique effect suggest a relation between warmth and externalizing but not internalizing symptoms.

In contrast to the specificity of warmth/involvement, neither ineffective discipline nor deficient monitoring was uniquely or differentially related to child externalizing and internalizing problems. Although these parenting behaviors have been found to relate to child problem behaviors (see McMahon et al., 2006), they often have not been examined in the context of parental warmth/involvement and other child problem behaviors. The current findings support the key role that warmth/involvement plays within the larger domain of parenting behaviors and is consistent with conceptual formulations offered by others (e.g., Dishion & McMahon, 1998). A second explanation for the findings regarding warmth/involvement versus discipline and monitoring should be considered: The range and standard deviation of the warmth/involvement score (range = 24–77; $SD = 11.87$) is substantially greater than the ranges and standard deviations of the ineffective discipline (range = 8–26; $SD = 3.92$) and deficient behavioral control (range = 8–27; $SD = 4.11$) scores. As such, relative to warmth/involvement, there may not be sufficient variability in the sample in terms of parental ineffective discipline or deficient behavioral control to detect significant relations.

The findings of the current study must be considered in the context of both its limitations and strengths. First, in terms of limitations, because the design is cross-sectional in nature, causal relationships cannot be inferred. Although the design is a meaningful first step toward examining parenting specificity in the context of depression, prospective designs could address, with more confidence, whether parenting behaviors are responsible for producing child symptoms (a parent effects perspective) or child symptoms are responsible for producing parenting behaviors (a child effects perspective). Second, the two major constructs of interest were gathered by way of questionnaire; inclusion of observational data or additional reporters in work seeking to replicate the findings would contribute to the richness and complexity of the exploration and perhaps to the confidence with which conclusions may be drawn (see McLeod, Weisz, & Wood, 2007). Third, the sample is restricted in that it is comprised of relatively well educated and primarily Caucasian participants and excludes youth who met diagnostic criteria for selected disorders (e.g., depression). Both restrict generalizability of the findings while the child exclusionary criteria also restricts the range of youth problem behaviors, possibly preventing significant relationships from emerging between some parenting variables and child problem behaviors. Nevertheless, it is important to note that the findings were consistent with those of Jones et al. (in press), which was conducted with a substantially different sample comprised of economically challenged inner-city African American nonclinic families. Fourth, warmth/involvement, externalizing problems, and internalizing problems are broad constructs. The disaggregation of each of these into more specific dimensions of parenting (e.g., praise) and problem behaviors (e.g., anxiety) may result in unique associations that could further clarify the current findings.

A number of strengths of the current investigation also merit mention. First, this study represents one of a very limited number of works to address parenting specificity and the first study to do so with a sample of caregivers with a history of depression. Second, the use of multiple informants (child report of parenting and parent report of child symptomatology) decreases the likelihood of shared method variance. Third, inclusion of depressed fathers can be viewed as a strength, as a majority of the work examining parenting in the context of

depression has focused solely on mothers (Phares & Compas, 1992; Phares, Fields, Kamboukos, & Lopez, 2005).

Our findings indicate that parental warmth/involvement, particularly in the context of parental depression, represents a powerful dimension of parenting that has important implications for child outcomes. Currently, intervention programs designed to address child and adolescent externalizing problems include modules that prescribe a warm, supportive, and child-focused parent–child relationship as a foundation on which other specific skills (e.g., clear instructions, consequences for rule violations and aggression) are built (e.g., McMahon & Forehand, 2003; Patterson & Forgatch, 1987/2005; also see Dishion & McMahon, 1998). However, interventions for internalizing symptoms have largely grown out of an individual-focused tradition with less emphasis on the parent–child relationship (e.g., Clarke, Lewinsohn, & Hops, 1990). The role of parenting in interventions for these types of symptoms has been understudied, with recent calls for more attention to this area of study (see Diamond & Josephson, 2005; Horowitz & Garber, 2006; Wood, McLeod, Sigman, Hwang, & Chu, 2003).

Within the context of intervention and prevention programs, the relation between parental warmth/involvement and internalizing symptoms could be examined in at least two ways. First, by extending the assessment procedures to include internalizing symptomatology, parent training packages designed to treat externalizing symptoms may further examine the relation of warmth/involvement—in the context of other theoretically relevant parenting dimensions—with both externalizing *and* internalizing child outcomes. As an illustrative example, DeGarmo, Patterson, and Forgatch (2004) found that internalizing problems mediated the association between changes in parenting behaviors (e.g., monitoring, warmth/involvement) and externalizing problems. Second, treatments aimed at preventing or ameliorating child externalizing and internalizing symptoms could manipulate parental warmth/involvement and examine outcomes for internalizing symptoms. In other words, the next level of research sophistication may begin to demonstrate causality by manipulating warmth/involvement.

Although neither deficient behavioral control nor ineffective discipline was a unique or differential predictor of internalizing and externalizing symptoms when considered in the context of parental warmth/involvement, it cannot be concluded that they are inconsequential predictors. Rutter (1989), for example, has suggested that conduct problems and depression may share some common determinants, including disorganized or lax parenting (i.e., deficient monitoring). Extending this line of reasoning, monitoring and discipline may not have relations specific to one type of problem behavior but rather may have a more generalized relation with child maladjustment.

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Table 1

Demographic Information

	M	SD	%
<i>Parent</i>			
Age (years)	42.25	7.62	
Female			86.6
Ethnic minority ^a			11.3
Marital status			
Married or living with someone as if married			67.0
Widowed			1.0
Divorced or annulled			17.5
Separated			4.1
Never married			10.3
Education			
Some high school (9th, 10th, 11th)			7.2
High school graduate (include equivalency exam)			9.3
Some college or technical school (at least 1 year)			30.9
College graduate			27.8
Graduate professional training (master's or above)			24.7
<i>Child</i>			
Age (years)	11.46	1.94	
Female			50.79
<i>Family yearly income</i>			
Under \$5,000			4.5
\$5,000–\$9,999			5.7
\$10,000–\$14,999			1.1
\$15,000–\$24,999			10.2
\$25,000–39,999			18.2
\$40,000–\$59,000			19.3
\$60,000–\$89,000			22.7
\$90,000–\$179,000			14.8
Over \$180,000			3.4

^aPercentage identifying as Black or African American, Latino or Hispanic, or Other or Non-Caucasian.

Table 2
Means, Standard Deviations, and Correlations Between Independent and Dependent Variables

	<i>M</i> (<i>SD</i>)	1	2	3	4	5
Parenting variables						
1. APQ Warmth/Involvement ^a	54.91 (11.87)	—	-.23**	-.26**	.01	-.29**
2. APQ Ineffective Discipline ^b	15.23 (3.92)		—	.63**	.09	.19*
3. APQ Deficient Monitoring ^c	14.68 (4.11)			—	.01	.07
Child outcome variables						
4. Child CBCL Internalizing <i>T</i> score	58.47 (9.93)				—	.49**
5. Child CBCL Externalizing <i>T</i> score	53.18 (10.17)					—

Note: *N* = 136 Children. APQ = Alabama Parenting Questionnaire; CBCL = Child Behavior Checklist.

^a Higher values indicate higher levels of parental warmth/involvement.

^b Higher values indicate higher levels of parental ineffective discipline.

^c Higher values indicate higher levels of deficient monitoring.

* *p* < .05.

** *p* < .01.

Table 3

Child-Reported Parenting Dimensions (APQ) Predicting Parent-Reported Child Externalizing Symptoms

	<i>F</i> (each predictor)	<i>B</i>	<i>SE</i>	<i>p</i>
Dependent variable: Child externalizing symptoms (CBCL)				
Model 1				
BDI-II	0.23	.03	.07	<i>ns</i>
CBCL-Int	38.40	.48	.08	<.001
Model 3				
APQ Warmth	12.57	-.23	.06	<.05
APQ Deficient Behavioral Control	1.32	-.27	.23	<i>ns</i>
APQ Ineffective Discipline	2.77	.41	.25	<i>ns</i>

Note: *N* = 136. *B* = unstandardized beta weight; BDI-II = Beck Depression Inventory, 2nd edition; CBCL-Int = Child Behavior Checklist–Broadband Internalizing Symptoms *T* Score; APQ = Alabama Parenting Questionnaire.

Table 4

Child-Reported Parenting Dimensions (APQ) Predicting Parent-Reported Child Internalizing Symptoms

	<i>F</i> (each predictor)	<i>B</i>	<i>SE</i>	<i>p</i>
Dependent variable: Child internalizing symptoms (CBCL)				
Model 1				
BDI-II	0.92	.07	.07	<i>ns</i>
CBCL-Ext	40.11	.47	.07	<.001
Model 3				
APQ Warmth	4.04	.14	.07	<.05
APQ Deficient Behavioral Control	0.07	.06	.24	<i>ns</i>
APQ Ineffective Discipline	0.01	.02	.25	<i>ns</i>

Note: $N = 136$. B = unstandardized beta weight; BDI-II = Beck Depression Inventory, 2nd edition; CBCL-Ext = Child Behavior Checklist–Broadband Externalizing Symptoms T Score; APQ: Alabama Parenting Questionnaire.