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CITATION
Mother–Son Discrepant Reporting on Parenting Practices: The Contribution of Temperament and Depression

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Despite low to moderate convergent correlations, assessment of youth typically relies on multiple informants for information across a range of psychosocial domains including parenting practices. Although parent–youth informant discrepancies have been found to predict adverse youth outcomes, few studies have examined contributing factors to the explanation of informant disagreements on parenting practices. The current study represents the first investigation to concurrently examine the role of mother and son’s self-reported affective dimensions of temperament and depression as pathways to informant discrepancies on parenting practices. Within a community sample of 174 mother–son dyads, results suggest that whereas mother’s self-reported temperament evidenced no direct effects on discrepancies, the association between the product term of mother’s negative and positive temperament and discrepancies on positive parenting was fully mediated by mother’s depression (a mediated moderation). In contrast, son’s self-reported temperament evidenced both direct and indirect effects, partially mediated by depression, on rating discrepancies for positive parenting. All told, both son’s self-reported affective dimensions of temperament and depression contributed to the explanation of discrepant reporting on parenting practices; only mother’s self-reported depression, but not temperament, uniquely contributed. Results highlight the importance of considering both parent and youth’s report in the investigation of informant discrepancies on parenting practices.

Keywords: informant discrepancies, assessment, parenting, temperament, depression

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In psychological assessments with youth, data collection in both research and clinical settings has commonly relied on multiple informants for reporting on a wide range of psychosocial variables. Indeed, the use of multi-informant ratings is considered essential in evidence-based assessment of youth psychosocial functioning (Hunsley & Mash, 2007). As context is important in youth assessment, the inclusion of multiple informants, each with their own unique perspective, helps to capture a more comprehensive and accurate picture of youth psychosocial functioning, which may vary across different settings (e.g., home, school; Kraemer et al., 2003). Data from multiple informants are particularly important for the investigation of key constructs associated with youth psychosocial functioning, such as parenting practices, wherein both parents and youth actively participate (e.g., Belsky, 1984). In practice, however, multi-informant assessment is complicated as meta-analytic findings (Achenbach, McConaughy, & Howell, 1987; De Los Reyes et al., 2015) suggest ratings from different informants consistently evidence low to moderate convergent correlations across a wide range of psychosocial variables (e.g., rs = .22–.28). Nonetheless, given their usefulness, convenience, and cost effectiveness, multiple informant approaches continue to be used in the psychological assessment of youth. However, researchers and clinicians largely operate blindly with a limited scientific evidence base to guide them in their use of multi-informant data. Specifically, preferential reliance on a single informant’s data over others or integrated data from multiple informants at the researcher’s discretion leads to different conclusions from research results (De Los Reyes, 2011). Further, highly discrepant multi-informant reports on youth psychopathological symptoms may lead clinicians to make incorrect assessments, diagnosis, and treatment decisions, depending on which data the clinicians choose to use and how they choose to interpret disagreements among multiple informants (Kraemer et al., 2003). In an effort to begin elucidating how best to conceptualize and utilize multi-informant data, a burgeoning body of research suggests that parent–youth informant discrepancy itself may serve as a proxy for an increased risk for adverse outcomes, particularly emotional and behavioral problems, in youth (Grills & Ollendick, 2003; De Los Reyes, 2011).

Parent–youth rating discrepancy is a particularly important phenomenon to study with regard to key constructs with known associations with youth psychosocial functioning, such as parenting. More specifically, parenting practices, which are often conceptualized as two separable dimensions, negative (e.g., poor parental monitoring, inconsistent parenting) and positive (e.g., parent involvement, appropriate discipline) parenting, have been
repeatedly linked to a range of negative and positive youth psychosocial outcomes including: externalizing (Dishion & Patterson, 2006) and internalizing (McLeod, Weisz, & Wood, 2007) problems, academic achievement, social and interpersonal functioning (Swanson, Valiente, Lemery-Chalfant, & O’Brien, 2011), resilience in the context of childhood adversity (Latzman & Latzman, 2015), and positive treatment outcomes (Diamond & Siqueland, 2001). Further, a large body of research has demonstrated that parenting is bidirectional and comprises both parent- and youth-driven processes, whereby both parents and youth’s characteristics contribute to parenting behaviors (Belsky, 1984; Latzman, Elkind, & Clark, 2009). As such, converging lines of research suggest that the use of data from multiple informants in general, and from parents and youth specifically, is particularly critical for a comprehensive assessment of parenting. Surprisingly, very few studies to date have examined discrepant reports of parenting as predictors of youth psychopathological outcomes (e.g., De Los Reyes, Goodman, Kliewer, & Reid-Quiones, 2010; Guion, Mrug, & Windle, 2009). In these studies, parent–youth informant discrepancies on parenting predicted youth negative outcomes, including internalizing and externalizing symptoms, and lack of social competence, indicating the importance of discrepancies of parenting practices in the investigation of youth psychopathology.

Despite an emerging literature suggesting that parent–youth informant discrepancies on parenting contribute to the explanation of important youth outcomes (e.g., De Los Reyes et al., 2010; Guion et al., 2009), less is known concerning factors that may help explain parent–youth informant disagreements on parenting. Further, as noted earlier, an extensive body of literature yields unequivocal evidence that parenting plays an important role in the prediction of both positive and negative youth outcomes (Dishion & Patterson, 2006; McLeod et al., 2007). In the current study, two promising factors, depression, with known links to discrepancies on parenting, and affective dimensions of temperament, which have been found to underlie depression, were investigated as potential pathways leading to informant discrepancies on parenting.

**Depression and Informant Discrepancies on Parenting**

In the informant discrepancy literature, parental, most often operationalized as maternal, depression represents the most widely studied potential predictor of informant discrepancies (e.g., De Los Reyes et al., 2015; Gartstein, Bridgett, Dishion, & Kaufman, 2009). According to the depression-distortion hypothesis, an informant’s ratings of a youth are negatively biased by the informant’s distorted perceptions and cognitions, key features of depression; parental depression therefore predicts negative cognitive bias in parent’s reporting of youth behavioral problems (Richerts, 1992). Although the exact underlying mechanism remains unclear, subsequent studies, though not entirely consistently, have shown support for the association between both parental and youth depression and negative rating bias including parenting (e.g., Chi & Hinzawa, 2002). In the only published study to date examining the contribution of self-reported depression to predictions of discrepancies on parenting, De Los Reyes, Goodman, Kliewer, & Reid-Quiones (2008) found that mother and youth depression were significantly related to discrepant reporting on parental monitoring behaviors. Although limited, the existing literature appears to suggest that depression contributes to the explanation of informants’ negative reports. As such, further investigation into the contribution of depression in both parents and youth to the prediction of parent–youth informant discrepancies on parenting is warranted.

**Temperament and Informant Discrepancies on Parenting**

Temperament is conceptualized as individual differences in patterns of emotional and behavioral reactivity and self-regulation, and describes individual tendencies, dispositions, and capacities that influence individual’s adaptation or maladaptation to the environment throughout life (Clark & Watson, 1991; Rothbart & Bates, 1998). A considerable structural literature has shown that trait temperament has a distinctive three-factor model, in which the two affective dimensions (negative and positive temperament [NT, PT]) evidence distinct associations with anxiety and depression (i.e., the tripartite model), explaining the differential phenotypic expression of these two highly overlapping forms of psychopathology (e.g., Clark & Watson, 1991; Clark, Watson, & Mineka, 1994; Watson, Gamez, & Simms, 2005). NT refers to a tendency for negative emotional and behavioral reactivity, including fear, sadness, and anger, whereas PT refers to a propensity for positive affect, including joy, interest, and excitement, as well as reward sensitivity and sociability (Clark & Watson, 1991; Rothbart & Bates, 1998). Notably, the tripartite model (Clark & Watson, 1991; Clark et al., 1994) reveals that NT and PT represent the core temperamental features underlying affective symptomatology; specifically, whereas NT is common across various forms of psychopathology, low levels of PT distinguishes those who experience depression (Clark & Watson, 1991; Clark et al., 1994). PT therefore plays a critical role in moderating the effect of NT on depression, indicating that joint and interactive contributions of NT and PT may be particularly important to consider in the explanation of depression. Further, prominent evidence-based treatment approaches have clearly recognized the importance of considering temperaments, beyond symptoms of individual disorders, in the treatment of affective disorders (e.g., Moses & Barlow, 2006).

Although temperament is a relatively stable global trait, emerging clinical research suggests that self-reported measures of the affective dimensions of temperament (NT and PT) tap both stable trait and transient state components of affect (Vittengl, Clark, Thase, & Jarrett, 2013, 2014). Self-reports of temperament therefore likely show changes with the fluctuating mood state that accompanies symptoms of depression. Indeed, in clinical studies examining individuals with depression who received psychotherapy, self-reported changes in temperament among individuals with current depression were found to be largely a function of transient distress rather than premorbid temperamental trait (Clark, Vittengl, Kraft, & Jarrett, 2003; Costa, Bagby, Herbst, & McCrae, 2005). Collectively, the extant literature suggests that affective dimensions of temperament, which tap both stable trait and transient state components of affect, likely account for more than just the variance explained by depressive symptomatology (Vittengl et al., 2013, 2014). Taken together, the extant literature suggests that depression and NT and PT, broad affective temperament dimensions known to underlie depression, represent two promising path-
ways leading to parent–youth informant discrepancies on parenting practices.

Current Study

The current study explicitly tested hypothesized path models that concurrently examined mother and son’s self-reported affective dimensions of temperament and depression as pathways to informant discrepancies on parenting practices. In accordance with the tripartite model (Clark & Watson, 1991; Clark et al., 1994), it was expected that mother and son’s NT would be positively, whereas mother and son’s PT would be negatively, associated with depression. Further, it was hypothesized that PT would interact with NT to explain depression for both mothers and sons; as compared to high levels of PT, at low levels of PT, NT would be more strongly associated with depression for both mothers and sons. In addition, consistent with the extant literature linking parent and youth depression to negative rating bias (De Los Reyes et al., 2008), it was hypothesized that maternal depression would be associated with higher discrepancies on negative parenting, whereas associated with lower discrepancies on positive parenting. As a function of how discrepancy scores are calculated (mother’s scores—son’s scores), it was expected that mothers and sons would show a reverse pattern; youth depression would be associated with lower discrepancies on positive parenting, while associated with higher discrepancies on positive parenting.

Also consistent with the tripartite model, it was expected that mother and son’s PT would moderate the effect of NT on depression as affective dimensions of temperament underlie depression through the NT × PT interaction (Clark & Watson, 1991; Clark et al., 1994). Further, the extant literature indicates that affective dimensions of temperament, which have been found to tap both trait and state components of affect, likely account for variance over and above the effects of depression (Vittengl et al., 2013, 2014), which have known links to discrepancies on parenting (De Los Reyes et al., 2010; Guion et al., 2009). As such, mother and son’s depression were expected to mediate the direct effects of mother and son’s NT × PT interaction on discrepancies on parenting. Collectively, the hypothesized path models represented a partial mediated moderation in which the effects of the interaction between mothers and son’s NT and PT on discrepancies on parenting are partially mediated by depression; as a result of the NT × PT interaction, mothers and sons with the combination of high levels of NT and low levels of PT would show increased levels of depression, which, in turn lead to discrepancies on parenting.

Given the paucity of prior research examining parent and youth temperament in the prediction of discrepancies on parenting, a priori hypotheses were tentative with regard to differential outcomes on parenting between parent and youth. Nonetheless, given the temperamental basis underlying depression (Clark & Watson, 1991; Clark et al., 1994), which have known links to negative rating bias (De Los Reyes et al., 2008), it was tentatively expected that mother and son’s temperament would account for independent portion of the variance in discrepant scores on parenting. Further, both mothers and sons with high NT were hypothesized to show higher negative rating discrepancies on negative parenting, whereas reporting lower positive rating discrepancies on positive parenting. As the effects of PT are conceptualized through the interaction with NT (Clark & Watson, 1991; Clark et al., 1994), neither mother nor son’s PT was expected to have significant direct effects on discrepancies for any of parenting variables.

Method

Participants

Participants included a community sample of 174 mother–son dyads who participated in the Iowa-Youth Development Project (I-YDP, Latzman et al., 2009), a larger study of adolescent males and their mothers. Participants were predominantly White mothers (M<sub>age</sub> = 44.2 years ± 5.33; 93.1% White, 6.9% Other) and their sons aged 11 to 16 years (M<sub>age</sub> = 13.64 ± 1.35; 87.9% White, 12.1% Other). The families were relatively high in socioeconomic status in terms of education and income, with 34.1% of the families exceeding an annual combined household income of $100,000. Most mothers were married to their son’s biological fathers (81.0%), had achieved at least college education (71.9%), and were mostly employed full-time (93.7%).

Procedure

The I-YDP used multiple recruiting methods to obtain a representative sample of Midwestern male youth; participants were recruited through a child participant database maintained by the psychology department as well as through fliers distributed in the community, advertisements placed in newsletters, and online advertisements in the affiliated university hospital. To ensure a typically developing sample, the exclusion criteria comprised intellectual disability, autism spectrum disorder, reading disorder, history of being held back a grade, neurological disorders, past brain injuries requiring hospitalization, and life-threatening medical conditions, all assessed by maternal report. Participants provided informed consent/assent prior to beginning the study. Mothers and sons completed surveys in a paper-and-pencil form in separate rooms. Participants received monetary compensation for their time and participation. The university’s Institutional Review Board approved all study protocols and materials.

Measures

Alabama Parenting Questionnaire. Mothers and sons separately reported on parenting practices using the Alabama Parenting Questionnaire (APQ; Frick, 1991), which consists of 42 items rated along a 5-point Likert-type scale ranging from 1 (never) to 5 (always). The APQ is designed to assess five aspects of parenting practices related to disruptive behavior problems in youth, which can further be combined into two composite scales: Positive and Negative Parenting (Frick, Kinnonis, Dandreaux, & Farel, 2003). The APQ has demonstrated criterion validity by differentiating clinical and nonclinical groups (Dadds, Maujean, & Fraser, 2003) and has evidenced good test–retest reliability (r > .80 for all scales; Dadds et al., 2003). In the current sample, internal consistency reliabilities (Cronbach’s alphas) were .76 for Negative Parenting and .75 for Positive Parenting for mothers, and .81 for Negative Parenting and .84 for Positive Parenting for sons.

Inventory of Depression and Anxiety Symptoms. Mothers reported on their depressive symptoms using the Inventory of Depression and Anxiety Symptoms (IDAS; Watson et al., 2007).
The IDAS has been found to show strong internal consistencies, with all scales' alpha's exceeding .80 and test-retest reliabilities \((r = .84)\) [General Depression; Watson et al., 2007]. The IDAS evidences strong convergent and discriminant validity with other self-reported measures of depression: the current study used the General Depression scale, a 20-item composite scale with strong convergent associations with widely used depression measures (Watson et al., 2007). In the current sample, internal consistency reliability (Cronbach’s alpha) was .81 for General Depression scale.

**Youth Self Report.** Sons reported on their own depressive symptoms using the Youth Self Report (YSR; Achenbach & Rescorla, 2001), which consists of 112 items rated along 0 (not true) to 2 (very true or often true). The YSR is designed to assess problem behaviors in internalizing (Anxious/Depressed, Withdrawn/Depressed) and externalizing (Rule-Breaking Behaviors, Aggressive Behaviors) scales. The YSR has shown good internal consistency \((\alpha = .76)\; \text{Yeh & Weisz, 2001}\), strong test–retest reliability \((r_s = .79–.95; \text{Achenbach & Rescorla, 2001})\) and criterion validity. Of note, although depression cross-loads onto both Withdraw/Depression and Anxiety/Depression scales in the factor analyses, they were nonetheless found to be distinct scales, in which the Withdrawn/Depressed scale primarily measures the depressive aspects of negative affectivity (Achenbach & Rescorla, 2001). The current study therefore used the YSR Withdrawn/Depressed scale to assess son’s depression. In the current sample, internal consistency reliability (Cronbach’s alpha) was .70 for Withdrawn/Depressed scale.

**Schedule for Nonadaptive and Adaptive Personality–2nd edition and youth edition.** Mothers and sons separately reported on their temperament using the Schedule for Nonadaptive and Adaptive Personality–2nd ed. (SNAP-2; Clark, 1993) and youth edition (SNAP-Y; Linde, Stringer, Simms, & Clark, 2013), respectively. The SNAP-2/Y each comprises 390 items rated along a true–false format and is designed to assess trait temperament from normal to pathological range. The SNAP-2/Y are factor analytically derived instruments and include three higher-order temperament traits, two of which, NT and PT, are the affective temperament dimensions used in the current study. The SNAP-2/Y have shown strong internal consistencies across samples \((\alpha = .80)\) in community and clinical patient samples; \(\alpha = .83\) in a youth sample and have demonstrated strong convergent and discriminant validity with other self-reported and interview-based measures of personality (Simms & Clark, 2006). Internal consistency reliabilities (Cronbach’s alphas) for current sample were .89 for NT and .82 for PT for mothers, and .89 for NT and .87 for PT for sons.

**Analyses.**

**Informant discrepancies.** Despite a literature converging on the notion that informant discrepancies may signal an increased risk for the youth psychosocial outcomes (Grills & Ollendick, 2003; De Los Reyes, 2011), the question of how best to operationalize informant discrepancies remains unresolved. Indeed, although multiple approaches have been proposed and tested (De Los Reyes & Kazdin, 2004; Laird & De Los Reyes, 2013), there is no consensus on how best to analyze informant discrepancies. Nevertheless, the most frequently used approaches include calculating difference scores (De Los Reyes & Kazdin, 2004), and both approaches have strengths and weaknesses. Specifically, in the difference scores approach, raw difference scores are calculated by subtracting mother’s raw scores from son’s raw scores, yielding an index of discrepancy for each of the two parenting variables. The raw difference scores approach has been shown to maximally capture intradyadic discrepancies (De Los Reyes & Kazdin, 2004; Guion et al., 2009). In the standardized difference scores approach, mother and son’s raw scores are first converted to z scores. Discrepancy scores are then calculated by subtracting son’s z scores from mother’s z scores on each of two parenting practice variables. The use of z scores has been shown to equalize the influence from the differential distribution of mother and son’s raw scores as well as to adjust for potential systemic bias (De Los Reyes & Kazdin, 2004; Guion et al., 2009). In line with the few previous studies on informant discrepancies on parenting (e.g., De Los Reyes et al., 2008), the current study used both standardized and raw difference scores to index discrepant reporting on parenting.

**Path analyses.** First, zero-order correlations were performed to examine associations among mother and son’s self-reported temperamental traits (NT and PT), depressive symptoms, and two aspects of parenting practices (negative and positive parenting). Then, using Mplus 6.0 (Muthén & Muthén, 1998–2010), path analyses were conducted using the maximum likelihood estimation with robust standard errors (MLR) to determine the fit of the hypothesized path models. Specifically, as described above, the hypothesized model assumed that the effects of mother and son’s NT × PT interaction on discrepancies in reports of negative and positive parenting would be partially mediated by depression.

**Preliminary Bivariate Analyses**

As shown in Tables 1 and 2, bivariate associations between mother–son discrepant report on parenting were significant but relatively small \((rs = -.24\) and -.24 for negative and positive parenting, respectively). In addition, associations between temperament and depressive symptoms were largely consistent across informants: both mother and son’s NT and PT were negatively associated with each other. Both mother and son’s NT was positively, and PT was negatively, associated with their depressive symptoms. Further, associations between mother and son’s depression and discrepancies on parenting variables were both significant. Given the formula for calculating discrepancy scores (mother’s ratings – son’s ratings), these scores relate in inverse ways to variables for different informants. Results therefore indicate that as depression scores increased for both mothers and sons, discrepancies on both negative and positive parenting showed higher negative ratings \((rs = 1.221\) and 1.311, \(rs = 1.161\) and 1.321, respectively). With the exception of son’s PT, which was negatively associated with discrepancies on positive parenting \((rs < -.30)\), mother and son’s temperament evidenced no association with discrepancies on any other parenting variables. That is, only sons with high levels of PT made higher positive ratings on positive parenting than did as their mothers: mother and son’s temperament scores were unrelated to discrepancies in ratings for any other parenting. Correlations between mother and son’s ratings on negative and positive parenting variables were moderate. Mean differences between
Discrepant Reporting on Parenting

Table 1
Correlations Among Mother’s Self-Reported Temperament, Depression, and Parenting Practices

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<thead>
<tr>
<th>Variable</th>
<th>1</th>
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<td>1. Mother NT</td>
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<td>2. Mother PT</td>
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<td>3. General Dep</td>
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<td>4. Mom Neg Par</td>
<td>.24</td>
<td>-.04</td>
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<td>5. Mom Pos Par</td>
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<td>6. Neg Par SDS</td>
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<td>7. Pos Par SDS</td>
<td>-.14</td>
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<td>8. Neg Par RDS</td>
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<td>.98</td>
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<tr>
<td>9. Pos Par RDS</td>
<td>-.10</td>
<td>.02</td>
<td>-.26</td>
<td>-.09</td>
<td>.36</td>
<td>-.23</td>
<td>.97</td>
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<td>10. Mother Age</td>
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<td>-.04</td>
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<td>.03</td>
<td>.03</td>
<td>-.05</td>
<td>.01</td>
<td>-.07</td>
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</table>

Note. N = 174. NT = negative temperament; PT = positive temperament; Dep = depression; Neg = negative; Pos = positive; Par = parenting; SDS = standardized difference scores (mother’s z scores − son’s z scores); RDS = raw difference scores (mother’s raw scores − son’s raw scores).

Table 2
Correlations Among Son’s Self-Reported temperament, depression, and Parenting Practices

<table>
<thead>
<tr>
<th>Variable</th>
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<td>2. Son PT</td>
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<td>3. With/Dep</td>
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<tr>
<td>5. Son Pos Par</td>
<td>-.16</td>
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<tr>
<td>6. Neg Par SDS</td>
<td>-.09</td>
<td>.01</td>
<td>-.31</td>
<td>-.52</td>
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<tr>
<td>7. Pos Par SDS</td>
<td>.06</td>
<td>.30</td>
<td>.16</td>
<td>.59</td>
<td>-.59</td>
<td>-.24</td>
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<tr>
<td>8. Neg Par RDS</td>
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<td>.001</td>
<td>-.31</td>
<td>-.70</td>
<td>.18</td>
<td>.98</td>
<td>-.23</td>
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<tr>
<td>9. Pos Par RDS</td>
<td>.10</td>
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<td>.19</td>
<td>.16</td>
<td>-.78</td>
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<td>10. Son Age</td>
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Note. N = 174. NT = negative temperament; PT = positive temperament; Dep = depression; Neg = negative; Pos = positive; Par = parenting; SDS = standardized difference scores (mother’s z scores − son’s z scores); RDS = raw difference scores (mother’s raw scores − son’s raw scores).

Path Analyses

Path model with standardized difference scores. When standardized difference scores were used to index informant discrepancies on parenting, the overall fit of the hypothesized model was good as indicated by a nonsignificant chi-square test of model fit, $\chi^2(9, 174) = 12.61, p = .18$, and all fit indices that exceeded recommended thresholds for good fit (the root mean square error of approximation [RMSEA] = .05; the comparative fit index [CFI] = .99; the square root mean residual [SRMR] = .03). The path model explained a significant 25% of the variance in discrepancies on negative parenting, and a significant 16% of the variance in discrepancies on positive parenting. Of note, youth age was found to be unrelated to discrepancies on parenting variables in the path models explaining both standardized and raw difference scores. As shown in Figure 1 left panel, the pattern of model paths varied by informant: mother’s PT interacted with NT to explain depression; as compared to high levels of PT, at low levels of PT, mothers’ NT was more strongly associated with depression. Further, mother’s temperament showed no direct effects on discrepancies for any parenting variables. Instead, mother’s NT was indirectly associated with rating discrepancies for positive parenting through depression (unstandardized indirect effects = -.25, $SE = .08$, $p < .01$ for NT and = .08, $SE = .04$, $p < .05$, for PT). Mother’s reports therefore evidenced a full mediated moderation in which the effects of the interaction between mother’s NT and PT on discrepancies on positive parenting are fully mediated by depression. To probe the nature of this interaction, a simple slopes analyses was conducted; as compared to high levels of PT, at low levels of PT, mothers’ NT was more strongly associated with depression than it was at high levels of PT ($\beta = .66, t = 8.79, p < .01$). As a result of the NT × PT interaction, mothers with both high levels of NT and low levels of
PT reported lower discrepancies on positive parenting through depression.

In contrast, son’s self-reported temperament evidenced direct effects on discrepancies on both parenting variables. Specifically, while son’s PT was directly associated with lower discrepancies on positive parenting, son’s NT was not related to discrepancies on any of parenting variables. Additionally, son’s NT × PT interaction was directly associated with higher discrepancies on negative parenting. These findings generally suggest that the direct effects of son’s NT on discrepancies on both negative and positive parenting varied according to the levels of PT. As was the case with mother’s reports, son’s PT also interacted with NT to explain depression. Specifically, simple slopes analyses revealed that as compared to high levels of PT (β = .32, t = 3.67, p < .01), at low levels of PT, son’s NT was more strongly associated with depression (β = .62, t = 7.23, p < .01). That is, as a function of the NT × PT interaction, sons with both high levels of NT and low levels of PT evidenced lower discrepancies on positive parenting through depression. However, son’s depression was unrelated to discrepancies on any form of parenting, indicating the associations between son’s temperament and discrepancies on parenting variables were not mediated by son’s depression.

Path model with raw difference scores. When raw difference scores were used to index discrepancies on parenting, the fit of this model was similar to that for the model with standardized difference scores; fit was good based on both a nonsignificant chi-square test of model fit and all fit indices that exceeded thresholds to be deemed good fit. The path model explained a significant 12% of the variance in discrepancies on positive parenting, while not accounting for the variance to explain negative parenting. As illustrated in Figure 1 right panel, the pattern of model paths again varied by informant: mother’s temperament did not evidence direct effects on discrepancies for any of parenting variables. Instead, mother’s NT indirectly predicted discrepancies on positive parenting through depression (unstandardized indirect effects = −.17, SE = .08, p < .05). Mother’s reports again evidenced a full mediated moderation in the prediction of discrepancies for positive parenting. Contrary to the mother’s reports, in son’s reports, the path model with raw difference scores revealed a different pattern of model paths as compared to the model with the standardized difference scores. Specifically, the direct effects of son’s NT × PT interaction were associated with higher discrepancies on positive but not negative parenting. In addition, son’s PT moderated the effects of NT on depression and son’s depression was positively associated with discrepancies on positive parenting. Further, son’s NT indirectly associated with discrepancies on positive parenting through depression (unstandardized indirect effect = .15, SE = .07, p < .05). Of note, the indirect effects of son’s PT as well as the NT × PT interaction term approached significance (unstandardized indirect effect = −.07, SE = .04 for PT, p = .056, unstandardized indirect effect = −.01, SE = .01, p = .055 for NT × PT, respectively). Collectively, only in the path model with raw difference scores, son’s reports evidenced a partial mediated moderation. That is, as a result of NT × PT interaction, at high levels of PT, sons with high levels of NT showed lower discrepancies on positive parenting through depression. That is, at low levels of PT, sons with high levels of NT reported higher discrepancy on positive parenting through depression.

Discussion

The overarching goal of the current study was to concurrently examine the role of mother and son’s self-reported affective dimensions of temperament and depression as contributors to informant discrepancies on parenting. The tested path models explaining informant discrepancies on parenting, with both standardized and raw difference scores, fit the data well. Specifically, the path model with standardized difference scores explained a significant 25% of the variance in discrepancies on negative parenting and a significant 16% of the variance in discrepancies on positive parenting. In the path model with raw difference scores, the model explained a significant 12% of the variance in discrepancies on positive parenting, while it did not account for the variance in the explanation of negative parenting. As described in more detail.
below, despite a high correlation between the standardized and raw difference scores for discrepancies on parenting ($r_s = .97-.98$), these differences between path models may reflect strengths and weaknesses associated with the difference scores approaches used in the current study.

Although mother’s self-reported temperament evidenced no direct effects on discrepancies for any of the parenting variables, mother’s NT and PT through their interaction were indirectly associated with lower discrepant ratings of positive parenting through depression, indicating a full mediated moderation. In contrast, results indicated both direct and indirect effects of son’s temperament on ratings discrepancies for parenting variables, suggesting a partial mediated moderation. Although, as described in more detail below, findings for son’s report varied depending on the type of difference scores used to calculate discrepancies on parenting variables, results of the path models generally confirm the contribution of son’s self-reported affective dimensions of temperament and depression as well as mother’s self-reported depression, but not temperament, as contributing factors to the explanation of parent–youth discrepancies in ratings of positive parenting.

A large body of research, underscored by recent meta-analytic findings, has repeatedly found that ratings from different informants consistently evidence low to moderate convergent correlations across a wide range of psychosocial variables (Achenbach et al., 1987; De Los Reyes et al., 2015). Consistent with previous findings, at the bivariate level, results of current study evidenced that mother–son cross-informant correlations on parenting were significant but in the moderate range. The relatively high cross-informant convergent correlations on parenting in the current study as compared to the reported findings from the two previous studies (e.g., $r_s = .23-.33$, De Los Reyes et al., 2008; $r_s = .02-.14$, Guion et al., 2009) might have yielded lower mother–son discrepancy scores. This may have, in turn, resulted in attenuated associations between mother and son’s reports on temperament and depression, and mother–son discrepancy scores on parenting, leading to a failure to detect significant associations across model paths. Nonetheless, despite relatively low rating discrepancies on parenting, which would likely result in more conservative estimates of contributing factors to these discrepancies, the models explained a significant and meaningful amount of variance in the explanation of discrepancies on parenting, indicating that both mother’s and son’s perspectives contribute meaningfully to rating discrepancies on parenting.

Consistent with the tripartite model (Clark & Watson, 1991; Clark et al., 1994), distinct associations between depression and the interaction of self-reported NT and PT were consistently evident for both mothers and sons, underscoring the robustness of this model. Specifically, both mother and son’s NT was negatively, and PT positively, associated with depression. In addition, PT consistently interacted with NT in the explanation of depression in both mothers and sons; as compared to higher levels of PT, at lower levels of PT, mother and son’s NT was more strongly associated with depression.

Consistent with extant literature linking both mother and youth’s depression to negative rating bias (De Los Reyes et al., 2008; Garstein et al., 2009), including reporting on parenting (Chi & Hinshaw, 2002), bivariate results revealed significant associations between depression in both mothers and sons and higher negative ratings on discrepancies on all parenting variables; mother’s depression was associated with higher mother–son discrepancies in ratings of negative parenting and lower mother–son discrepancies in ratings of positive parenting. Son’s depression showed the reverse pattern of association as a function of the calculation method of discrepancy scores (mother’s scores—son’s scores). These findings indicate that both mother and son’s depression was associated with higher negative ratings on both parenting variables. Further, when mother and son’s temperament and depression were examined simultaneously in the path models, significant associations between informant’s depression and negative rating bias on parenting behavior also emerged. Specifically, after accounting for mother’s temperament, mother’s depression continued to be associated with lower discrepancy, whereas son’s depression was associated with higher discrepancy, on positive parenting. Surprisingly, however, mother and sons’ depression was not found to be related to discrepancies on negative parenting. That is, both mothers and sons with higher levels of depression reported higher negative ratings on discrepancies on positive parenting but evidenced no association with discrepancies on negative parenting. Neither mother nor son depression, however, was significantly associated with rating discrepancies for negative parenting. Of particular note, the internal consistency reliability of son’s ratings on negative parenting was relatively low, which might have attenuated the magnitude of associations, resulting in a failure to detect significant associations.

Further, the lack of finding on discrepancies of negative parenting may also be due, in part, to the way that difference scores were calculated as well as different patterns of mother and son’s ratings on negative parenting. A conceptual model (the attributional bias context model; De Los Reyes & Kazdin, 2005) suggests that informant discrepancies result from the differences in informant attributions regarding the causes of the child problems across contexts. In the case of parenting, specifically, negative parenting, children are more likely than their parents to attribute the causes of negative parenting to the parent’s disposition, resulting in reporting higher negative ratings on negative parenting scales than their parents. Conversely, parents are more likely than their children to attribute the causes of the negative parenting to the context, and not to themselves, resulting in reporting lower negative ratings on their own negative parenting scales than their children. With regards to positive parenting, the reverse patterns would emerge between mothers and their children. Although the model has not been fully examined in the literature, recent findings (e.g., De Los Reyes & Kazdin, 2004) and the results of current study nevertheless appear to support this framework in the investigation of parenting. With regard to the null results on discrepancies of negative parenting, as shown in the Tables 1 and 2, bivariate analyses revealed that the correlation between mother’s depression and their ratings on negative parenting was larger than the association between son’s depression and their ratings on negative parenting, indicating that the effects of mother’s depression may be greater than those of son’s depression on ratings of negative parenting. Given the opposite patterns of mother and son’s reporting on negative parenting, mother–son rating discrepancies on negative parenting may decrease as a function of mothers with depression reporting higher negative ratings concerning their own negative parenting than the mothers without depression. Nevertheless, results of the current study provide general support for a
negative rating bias among informants with depression in the explanation of discrepancies on positive, but not negative parenting (De Los Reyes et al., 2008). These differential findings again underscore the importance of considering both positive and negative parenting as well as employing a multi-informant approach to the advancement of our understanding concerning parent–youth discrepant reporting on parenting.

Although the extant research has never examined parent and youth temperament as a potential factor associated with discrepancies on parenting before, the combination of existing literature concerning temperament and depression suggests potential associations between temperament and mother–son discrepant reports on parenting (Clark & Watson, 1991; Clark et al., 2003). It was therefore expected that mother and son’s NT and PT through the interaction would independently explain discrepant scores on parenting. Contrary to expectations, however, patterns of associations between informant’s affective dimensions of temperament and parent–youth discrepant reports on parenting variables in the path models differed according to which informant’s temperament variables were included. Specifically, the model including mother-reported temperament evidenced a full mediated moderation in which mother’s NT through interaction with PT was found to be indirectly associated with lower discrepancies on positive parenting through depression. In comparison, as expected, the model including son-reported temperament was found to be partially mediated by depression in the explanation of discrepancies on parenting, but only with raw difference scores. That is, sons with high levels of NT and low levels of PT showed increased depression, which, in turn, were associated with higher discrepancies on positive parenting. Of particular note, at the bivariate level, with the exception of son’s PT, which was negatively associated with discrepancies on positive parenting, mother and son’s temperament evidenced no associations with discrepancies on any other parenting variables. These findings suggest that whereas the effects of mother’s temperament on discrepancies on parenting was fully accounted for by the effect of mother’s depression, the effect of son’s temperament on discrepancies for parenting were not dependent on son’s depression in the explanation of parenting.

One possible explanation for these inconsistent findings may be that differences between what mother and son’s self-reports of affective dimensions of temperament and depression each represent in the current study. As noted earlier, whereas self-reported affective dimensions of temperament tap both transient state and stable trait components of both normal and more pathological-range affect (Clark et al., 2003; Costa et al., 2005), depression likely represents the fluctuating mood state and a more pathological-range of trait dimensions of temperament (Vittengl et al., 2013). It is therefore plausible that mother and son’s affective dimensions of temperament likely represent more normal range of trait components of affect, while depression represents pathological-range affect. Indeed, pathological-range personality and temperament have been repeatedly found to predict a range of psychosocial functional impairment (e.g., Roberts, Kuncel, Shiner, Capsi, & Goldberg, 2007). Moreover, pathological-range NT and depression, which are strongly associated with each other, have been independently linked to poor psychosocial functioning (e.g., McKnight & Kashdan, 2009). As such, it is possible that mother and son’s depression also likely manifest functional impairment associated with pathological-range NT, whereas their temperament, in isolation, does not.

In the current study, the mean levels of both mother and son’s depressive symptoms were nearly identical to or slightly below the levels typically seen among nonclinical similar-aged community samples (e.g., Achenbach & Rescorla, 2001; Watson et al., 2007). However, the extant literature is unequivocal concerning risk factors associated with development of depression including being female and middle-aged (Centers for Disease Control and Prevention, 2010), which fit with mothers’ profiles in the current study. Indeed, post hoc analyses revealed that a greater number of mothers than of sons reported higher levels of current depressive symptoms and were prescribed antidepressant medications (i.e., 17.8% of mothers and 4.6% of sons were prescribed antidepressant). Given the higher base rate of depressive symptoms among mothers in the current sample, these findings may be indicative of mothers reporting more pathological-range of trait components of affect and lower psychosocial functioning associated with depression, relative to their sons who likely evidence less pathological-range affect and more normative levels of psychosocial functioning. Most importantly, results of the current study suggest that more normal ranges of trait components of affect, at least among sons, uniquely contributed to the explanation of discrepancies on positive parenting. In other words, as compared to youth with lower levels of NT, youth with high levels of NT alone, with or without depressive symptoms, evidenced increased levels of discrepancies on parenting. These findings highlight the importance of considering both affective dimensions of temperament and depressive symptoms as pathways to the explanation of discrepancies on parenting.

Although different analytical approaches have been used and compared to evaluate informant discrepancies, consensus has yet to be reached on how best to analyze informant discrepancies (De Los Reyes & Kazdin, 2004; Kraemer et al., 2003). In the current study, discrepancy scores were operationally defined using two of the more frequently used approaches, the difference between standardized and raw mother and son’s scores, with each approach evidencing strengths and weaknesses. In the only published study examining informant’s self-reported depression in the explanation of parent–youth discrepancies on parenting (De Los Reyes et al., 2008), no significant differences were found between the two difference scores approaches. In contrast, results of the current study varied across scoring approaches with regard to son, but not mother’s reports of discrepancies on parenting. These findings may indicate that the standardized difference scores might indeed result in lost information concerning the differences in the rating variances across informants as the standardized difference scores are derived from a difference between mother and son’s scores in relation to other mother and son’s ratings in this sample. Conversely, as indicated by differences in the percentage of variance explained between two path models, the raw difference scores might reflect differential distributions of informant’s scores, in particular, within son’s ratings. In an attempt to address these interpretive challenges, researchers have begun investigating information discrepancies using polynomial regression analysis approaches. Such an approach is thought to allow for a more comprehensive interpretation of discrepancy scores (Laird & De Los Reyes, 2013). Nonetheless, this approach unfortunately was not possible in the current study, which included mother and son’s NT × PT product terms as exogenous variables in the hypothesized path models. It will be important for research to continue to
consider how best to analyze informant discrepancies, particularly when including product terms in analytic models.

Limitations

The analyses of cross-sectional data in the current study does not allow for causal inferences to be made. Nonetheless, from both theoretical and clinical perspectives, cross-sectional data allowed us to parse out variance differentially attributed to temperament and depression in the explanation of observed indicators of parent-child disagreement on reports of parenting. Indeed, data are typically cross-sectional in nature in clinical settings. Nonetheless, it will be important for the results of the current study to be replicated using longitudinal data to ensure the theorized directionality of influences is accurate. Given the bidirectional nature of parenting (Belsky, 1984; Maccoby, 1992), future research would benefit from investigating bidirectional influences of predictive variables, underscoring the need for future longitudinal research to confirm the importance of affective dimensions of temperament and depression as pathways to parent–youth rating discrepancies on parenting. In addition, the current sample represented a community sample comprising of predominantly White mothers and their sons with moderate to high socioeconomic status. Given that a limited but informative body of research has shown that fathers may differ in their parenting approaches (e.g., Neiderhiser, Reiss, Lichtenstein, Spotts, & Ganiban, 2007), future research should examine different pairs of informants, in particular, father-child dyads, in more racially, ethnically, and socioeconomically diverse samples to confirm that results of the current study reflect differences in informants’ temperament and depression in the investigation of rating discrepancies for parenting. Further, the current sample likely included both mothers with current depression and those with a history of depression but no current depression. Previous research has found that in current clinically depressed parents, depression is associated with higher negative parenting behavior than the parents with a history of depression that is currently in remission (e.g., Garber, Ciesla, McCauley Diamond, & Schloredt, 2011). It is therefore important to examine informants with current symptoms of depression and/or a history of depression to test for differential outcomes in the investigation of rating discrepancies for parenting.

Furthermore, the current study used mother and son’s self-reports, which might have resulted in observed effects potentially being explained, at least partially, by shared informant variance. Future research would benefit from multmethod assessments of key constructs (e.g., laboratory observation) to test for differential outcomes using different information sources in the investigation of discrepancies on parenting. Moreover, the current study used aggregated negative and positive parenting scales to assess discrepancies on parenting despite parenting being a multifaceted construct (Skinner, Johnson, & Snyder, 2005), with a transition in parenting approaches across youth development (e.g., Baumrind, 1991). Future research is encouraged to examine potential differential associations among various parenting dimensions when investigating discrepancies on parenting, potentially across different youth age groups. Lastly, the current study examined only two contributing factors. More research is needed to consider additional potential factors in the explanation of rating discrepancies on parenting. For example, previous studies appear to suggest that parent and child anxiety alone, may also be promising avenues for future studies (e.g., Muris, Huijding, Mayer, & Hameetman, 2008).

Limitations notwithstanding, results of the current study contribute to the limited literature on factors contributing to the explanation of parent–youth informant discrepancies on parenting practices and underscore the importance of examining both parent and youth’s report in the investigation of informant discrepancies on parenting practices. The identification of son’s self-reported affective dimensions of temperament along with depression as well as mother’s self-reported depression as the pathways leading to the explanation of parent–youth informant discrepancies, which have been found to predict adverse youth psychosocial outcomes, is essential for advancing clinical assessment of youths.

References


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