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Parents' Reports of Children's Internalizing Symptoms: Associations with Parents' Mental Health Symptoms and Substance Use Disorder

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Abstract

This brief report examined the unique associations between parents' ratings of child internalizing symptoms and their own depression and anxiety in families with parental substance use disorder (SUD). Further, we examined whether parental SUD (father only, mother only, both parents) was related to discrepancy in mothers' and fathers' reports of children's internalizing symptoms. Participants were 97 triads (fathers, mothers) in which one or both parents met criteria for SUD. Polynomial regression analyses were conducted to examine whether father-mother reports of child internalizing symptoms had unique associations with parents' own symptoms of depression and anxiety while controlling for child gender, child age, and SUD diagnoses. Controlling for fathers' symptoms and other covariates, mothers experiencing more depression and anxiety symptoms reported more symptoms of child internalizing symptoms than did fathers. Mothers' and fathers'

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Author Contributions:

MLK: designed and executed the study, conceptualized the research questions, and wrote the paper. AJB: analyzed the data, wrote part of the results, and collaborated in editing the final manuscript. HCH: collaborated with writing and editing the paper. ALB: collaborated with the analysis, and collaborated with writing and editing the final manuscript. TDW: collaborated with writing and editing the paper. JJ: collaborated with writing and editing the paper.

Compliance with Ethical Standards:

The study was approved by the institutional review board at the participating institution. Parents gave written consent for themselves and their children; youth gave verbal assent. All procedures performed were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

SUD was associated with higher anxiety symptoms among mothers after controlling for other variables. A second set of polynomial regressions examined whether father-mother reports of child internalizing symptoms had unique associations with parents' SUD diagnoses while controlling for child gender and child age. After controlling for mothers' symptoms and other covariates, parents' reports of children's internalizing symptoms were not significantly associated with either parent's SUD or parental SUD interactions (i.e., both parents have SUD diagnoses). Taken together, mothers' ratings of children's internalizing symptoms may be accounted for, in part, by her reports of depression and anxiety symptoms.

Keywords

cross-informant agreement; substance use disorder; depressive symptoms; anxiety symptoms

Introduction

Within the clinical child literature, researchers have advocated using multiple informants to rate and classify youth psychopathology (Mash & Hunsley, 2005). At the same time, previous research has provided evidence of cross-informant disagreement on ratings of youth emotional and behavioral problems (see De Los Reyes et al., 2015 for a review). Beyond just an assessment/statistical nuance, mother-father discrepancy in these ratings may hinder accurate classification and treatment of child psychopathology (see De Los Reyes & Kazdin, 2005 for an overview). Understanding father-mother discrepancies in informant ratings of children's internalizing symptoms in families in which one or both parents have substance use disorder (SUD) may be especially valuable given that children of substance-abusing parents have greater risk for both depression and anxiety as compared to peers (Bountress & Chassin, 2015; Hussong, Flora, Curran, Chassin, & Zucker, 2008; Ringoot et al., 2015). Further, both parent SUD and parent mental health problems may be associated with parents' ability to accurately rate their children's symptoms (Bingham, Loukas, Fitzgerald, & Zucker, 2003; Hennigan, O'Keefe, Noether, Rinehart, & Russel, 2006; Ringoot et al., 2015) and may impact discrepancy in parent ratings.

Research suggests that parental psychopathology may influence reports of child mental health. The depression-distortion hypothesis (Richters, 1992; Richters & Pellegrini, 1989) posits that parents experiencing depression are more likely to introduce a negative bias when assessing their children's behavior, resulting in an inflation of reported mental health symptoms in their children. Another source of cross-informant disagreement between parents and children is described by the Attribution Bias Context model, which suggests that reporting discrepancies may result from discordant perspectives between informants (De Los Reyes & Kazdin, 2005). In support of the ABC model and depression-distortion hypothesis, previous research has demonstrated that parents' depression and anxiety are associated with over-reporting children's problem behaviors (De Los Reyes & Kazdin, 2005; Gartstein, Bridgett, Dishion, & Kaufman, 2009; Hennigan et al., 2006; Treutler & Epkins, 2003). However, when other variables, such as family functioning, are controlled, the impact of mood on ratings is non-significant or small (e.g., De Los Reyes et al., 2011; van der Toorn et al., 2010). Moreover, van der Toorn et al. (2010) found after controlling for maternal lifetime

and past-week anxiety, mothers' lifetime depression and past-week depressive symptoms were associated with mothers' reporting more internalizing symptoms than children; however, the amount of variance accounted for was between three and five percent. After controlling for lifetime depression and past-week depressive symptoms, maternal lifetime and past-week anxiety scores did not predict mother-child internalizing discrepancies.

In addition to parental depression and anxiety, during periods of intense substance use, parents may exhibit less child monitoring (e.g., Bountress, Chassin, & Lemery-Chalfant, 2016) and be periodically or habitually uninvolved and emotionally unavailable to children (e.g., Conner-Burrow et al., 2015). Thus, SUD may render parents less able to accurately appraise their children's internalizing symptoms and result in greater discrepancy between the SUD and non-SUD parents' reports. For instance, mothers with SUD have been shown to minimize their children's problems possibly due to avoidance or a lack of awareness of children's problems (Hennigan et al., 2006). Further, Bingham et al. (2003) found parental depression, alcoholism diagnosis, and antisociality had the largest bivariate correlations with parent agreement; however, these variables had a small impact on the low levels of parent agreement. At the same time, they concluded that both mothers' and fathers' ratings of their sons' behavior are equally structurally valid and reflect the child behavior experienced by each family member.

In addition to parent mental health and SUD, child characteristics may also impact parent ratings. For instance, Ladd and Kochenderfer-Ladd (2002) found whether parent or teacher ratings best explained youth peer victimization differed by child grade. Further, mother-father rating discrepancies for children's internalizing behavior were greater for girls (Marcendaro, Herman, & Webster-Stratton, 2012).

Despite calls for research that includes fathers' ratings of their children's emotional symptoms (Connell & Goodman, 2002; De Los Reyes & Kazdin, 2005), there has been slow progress in understanding how fathers' ratings of children's internalizing symptoms are associated with mothers' ratings. Often in two-parent homes, the parent with SUD is the father or father figure. In some cases, clinicians may be wary of using reports from the parent (typically the father) with SUD; however, depressive and anxiety symptoms are prevalent among both individuals with SUD (Lai, Cleary, Sitharthan, & Hunt, 2015) and their non-substance-abusing partners (Dawson, Grant, Chou, & Stinson, 2007; Iqbal, Ahmad, & Rani, 2015). Findings from the general population suggest that it is possible that information from fathers may have greater meaning when mothers have psychopathology and may serve to balance against mothers' ratings, potentially improving accuracy of ratings (Krain & Kendall, 2000). Further, in a study examining both qualitative and quantitative aspects of informant discrepancies, mothers' but not fathers' psychological distress was associated with mother-child discrepancies in reporting children's internalizing symptoms, perhaps because mothers reported more time involved with children compared to fathers (Treutler & Epkins, 2003). With respect to the importance of fathers' ratings, Hay et al. (1999) found better psychological adjustment among fathers was negatively related to discrepancy between fathers' and children's ratings of children's internalizing and externalizing symptoms.

Investigators have called for researchers to obtain data from fathers with SUD when examining family and youth functioning in these homes (e.g., McMahon & Rounsaville, 2002). A closer examination of mother-father discrepancy on children's internalizing symptomatology among couples with SUD, with special attention paid to the father, would not only extend the body of literature concerning informant discrepancies, but also contribute to our understanding of the assessment and treatment of children who live with a parent with SUD. For this reason, the purpose of the present brief report is to extend research on informant discrepancies in the ratings of children's internalizing symptoms among substance-abusing parents. Based on the Attribution Bias Context Model (De Los Reyes & Kazdin, 2005), we expected that parents' reports of children's internalizing symptoms would have a significant association with their own symptoms of depression/anxiety, while controlling for the other parent's perceptions of children's internalizing symptoms. Specifically, we anticipated that higher reports of both depression and anxiety symptoms among parents would be associated with parents' reporting more internalizing symptoms of the child (i.e., the parent would report more child internalizing symptoms if the parent reported more symptoms of depression and anxiety). Further, we expected a similar association between parental SUD and parental SUD interaction and their reports of children's internalizing symptoms (i.e., with SUD and the interaction being associated with more reported symptoms).

Method

Participants

The present research is a secondary analysis of data from an ongoing study in which couples received Behavioral Couples Treatment (BCT) for substance abuse (Author, 2016). Eligibility criteria included: (a) one or both parents had to meet drug or alcohol abuse or dependence criteria (see below), (b) there was no history of severe partner violence (determined from select injury items; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), (c) family members had to speak fluent English, and (d) parents had to reside with the target child at the time of the interview. For families with multiple children under the age of 18, the target child had the closest birthdate to the initial study screening. Although 104 triads (i.e., father, mother, and child) completed the pretreatment assessment, only data from families with children between the ages of 5 and 18 years old ($n = 97$) are examined within the present study. Independent t tests revealed no significant differences between the full sample as compared to the analytic sample on demographic (e.g., child gender) and study variables (e.g., parents' symptoms of anxiety and depression). See Table 1 for a full description of the analytic sample (e.g., age, race, income) by parent gender, including parent reports of child age and gender.

Procedure

Mothers, fathers, and children were compensated \$30 each at the pretreatment assessment. The study was approved by the participating institution's institutional review board. Each family member completed their assessment privately and in a separate room. Parents gave written consent for themselves and their children to participate; youth gave verbal assent. See Author (2016) for more information regarding recruitment and treatment.

Measures

Parental SUD—Participants were diagnosed with substance use disorders using the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID; First, Spitzer, Gibbon, & Williams, 2010). Among fathers, 42 (43.80%) met criteria for both drug and alcohol diagnoses, 26 (27.10%) met criteria for alcohol use diagnosis, 13 (13.50%) met criteria for drug use diagnosis, and 15 (15.60%) did not meet criteria for either drug or alcohol use diagnosis. Among mothers, 25 (26.00%) met criteria for both drug and alcohol diagnoses, 11 (11.50%) met criteria for alcohol use diagnosis, 10 women (10.40%) met criteria for drug use diagnosis, and 50 women (52.10%) did not meet criteria for either drug or alcohol use diagnosis. Further, there were 36 (37.11%) families in which both parents were diagnosed with a SUD. A SUD diagnosis variable was created for each parent, scored dichotomously to reflect presence/absence of an SUD (0 = *no*, 1 = *yes*), and an interaction between those two variables represented if both parents had a SUD diagnosis (0 = *no*, 1 = *yes*).

Parents' anxiety and depressive symptoms—Parents' anxiety and depressive symptoms were assessed using the Symptom Checklist-90 Revised (SCL-90-R; Derogatis, 1994). The SCL-90-R is a self-report measure that consists of 90 items and uses a 5-point response scale (0 = *not at all*, 4 = *extremely*). The measure consists of nine primary symptom subscales; however, only the subscales assessing symptoms of depression (13 items; e.g., crying easily, feeling hopeless about the future) and anxiety (10 items; e.g., nervousness or shakiness inside, feeling tense or keyed up) were used in the current study. The SCL-90 has been found to be both reliable and valid in assessing adults' anxiety and depressive symptoms (Bech, Bille, Møller, Hellström, & Østergaard, 2014). Reliability coefficients were .90 and .92 (depressive symptoms), and .90 and .87 (anxiety symptoms), for fathers and mothers, respectively.

Parents' reports of children's internalizing symptoms—Parents' reports of children's internalizing symptoms were assessed using the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Both parents completed the scale on the target child. Items are scored on a 3-point response scale (0 = *not true*, 1 = *somewhat or sometimes true*, 2 = *very true or often true*). For the present study, we examined the internalizing dimension, which is comprised from three subscales (anxious/depressed, withdrawn, and somatic complaints). The CBCL has been found to be both reliable and valid in assessing parents' reports of children's internalizing symptoms (Achenbach & Rescorla, 2001). Reliability coefficients were .86 and .87 for fathers' and mothers' reports, respectively.

Data Analyses—Consistent with current approaches in the literature, we used a polynomial regression approach to assess mother-father discrepancies (Laird & De Los Reyes, 2013; Laird & Weems, 2011) in order to examine discrepancies of perceptions within dyads. This approach allows for the direct examination of whether unique variability between reports is associated with criterion variables, controlling for ratings by other informants. The aim of the current study is to examine whether parents' reports of children's internalizing symptoms have a significant association with mothers' and fathers' mental health symptoms and parental SUD, after controlling for the other parent's perceptions of

children's internalizing symptoms (i.e., if elevated parent reports of child symptoms are associated with parents' own mental health symptoms). In order to test the aims of the current study, we focus on the main effects within the regression analyses, as these reflect the unique contributions of each parent's reports, controlling for the reports of the other informant. Importantly, by controlling for the other informant's reports, the main effects in the regression indicate the unique association for that informant (i.e., if elevated or deflated ratings compared to the other informant are associated with the criterion).

Parent mental health symptoms (e.g., symptoms of anxiety or depression) was regressed onto both parents' reports of children's internalizing symptoms, mother SUD (0 = *no SUD diagnoses*, 1 = *SUD diagnoses*), father SUD (0 = *no SUD diagnoses*, 1 = *SUD diagnoses*), and parental SUD interaction (0 = *no*, 1 = *both parents have SUD diagnoses*). Further, income and employment status for each parent as well as child gender and child age were entered as covariates within each model given their potential link to parents' psychopathology and informant discrepancies (see Author et al., 2016; De Los Reyes & Kazdin, 2005). Separate analyses were conducted for each type of parent mental health symptom (e.g., fathers' depressive symptoms, mothers' anxiety symptoms), yielding four separate models. Further, another set of polynomial regressions models were conducted focusing on associations between parents' reports of children's internalizing symptoms and parents' SUD. Parental SUD was regressed onto both parents' reports of children's internalizing symptoms, again controlling for income and employment status for each parent as well as child gender and child age. Separate models were conducted for mothers' SUD, fathers' SUD, and the prediction of couples wherein both parents are diagnosed. Parents' reports of children's internalizing symptoms were standardized for all models.

Within each model, parents' reports of children's internalizing symptoms and their interaction were entered as predictors of each parent's mental health symptoms (anxiety or depressive symptoms) or SUD diagnoses. Given the potential for the misinterpretation of a non-linear relationship between main effects and to take into account the complexity of the relationships (Edwards, 1994; Laird & De Los Reyes, 2013) we ran additional analyses with higher order terms (i.e., quadratic and cubic main effects, quadratic interactions). However, none of these effects were significant. Thus, the models included here are the more parsimonious models without these nonsignificant effects.

Results

Before analyses were conducted, data were cleaned and statistical assumptions were addressed. The bivariate correlations, descriptive statistics (raw scores), and internal consistency of variables are reported in Table 2. As seen in the table, parents' mental health symptoms were correlated with each other's and with their own reports of children's internalizing symptoms. Further, fathers' SUD diagnosis (positively) was significantly correlated with their own depressive and anxiety symptom levels. Unique effects from the regressions between parents' reports of children's internalizing symptoms on parental mental health symptoms are summarized in Table 3 and on parental SUD in Table 4. Further, because our design is cross-sectional, our results may be interpreted as associations between the constructs, not predictive models.

As seen in Table 3, controlling for fathers' reports of children's internalizing symptoms and other covariates, mothers' reports of children's internalizing symptoms was significantly positively associated with both maternal depressive symptoms ($\beta = .42$) and maternal anxiety symptoms ($\beta = .41$), such that higher maternal depressive and anxiety symptoms were associated with elevated mothers' ratings of child internalizing symptoms. Within the maternal anxiety symptoms model only, both mother and father SUD were associated with higher maternal anxiety symptoms after controlling for relevant covariates. Parents' reports of children's internalizing symptoms were not significantly associated with father's mental health (neither depressive nor anxiety symptoms) after controlling for relevant covariates (see Table 3). Parents' reports of children's internalizing symptoms were not significantly associated with parental SUD nor their interaction (i.e., both parents have SUD diagnoses) after controlling for relevant covariates (see Table 4).

Discussion

The present study extends the literature by examining how mothers' and fathers' symptoms of depression and anxiety and SUD are associated with mothers' and fathers' reports of children's internalizing symptoms. After controlling for fathers' reports of children's internalizing symptoms, mothers who reported more symptoms of depression and anxiety reported more internalizing symptoms. These findings support previous research. For instance, in a study of high-risk families, mothers' depressive symptoms were associated with inflated ratings of their adolescent daughters' internalizing symptoms (Gartstein et al., 2009). Although we should caution the reader that we cannot be assured that mothers over-reported their children's symptoms, these findings are consistent with the depression-distortion hypothesis in that mothers experiencing more depressive symptoms report more internalizing symptoms in their children (e.g., De Los Reyes & Kazdin, 2005; Treutler & Epkins, 2003). Importantly, men's alcohol abuse is associated with their female partners' psychological distress (e.g., Tempier, Boyer, Lambert, Mosier, & Duncan, 2006) and women who have partners with alcohol problems are more likely to have mood and anxiety disorders (Dawson et al., 2007). Because women with partners who have SUD are more likely to have mental health disorders which in turn may be associated with their ratings of children's behavior, in these instances it may be important to obtain assessments of children's behavior by multiple raters.

Fathers' reports of their own depression and anxiety symptoms were not uniquely associated with their reports of children's internalizing symptoms. This result is similar to that of Treutler and Epkins (2003) who found mothers' but not fathers' psychological distress was associated with mother-child discrepancies in reporting children's internalizing. Of interest, fathers' SUD was moderately associated with their reports of depressive and anxiety symptoms (see Table 1); however, it appears that fathers' ratings of children's internalizing symptoms may be less related to their own affect. If this is the case, as suggested by Krain and Kendall (2000), fathers' ratings may serve to balance against mothers' ratings and potentially increase the accuracy of ratings.

More generally, there is a general perception that fathers with SUD, especially those who use illicit substances (e.g., cocaine and heroin), are uninvolved in their children's lives.

Further, mothers are often sought out to provide information on their children and are generally believed to be the most accurate rater of children's internalizing symptoms (see Vallotton, Harewood, Froyen, Brophy-Herb, & Ayoub, 2016). However, corresponding with the larger child clinical literature (see De Los Reyes & Ohannessian, 2016 and De Los Reyes et al., 2015 for reviews), mother-father correspondence on internalizing symptoms in the present study was moderate and significant. More specifically, the mean mother-father correlation was .34 in the present study, whereas in a recent meta-analytic study, De Los Reyes et al. (2015) found mean mother-father correlations for children's internalizing symptoms of .48. These results suggest in families which one or both parents have SUD, mothers' and fathers' may witness overlap in children's internalizing symptoms in the home context. This correlation is notable in that parents report less correspondence in their reports of children's internalizing versus externalizing symptoms (e.g., De Los Reyes et al., 2015). Taken together and despite the difficulty recruiting fathers to participate in research and clinical assessments, fathers' ratings may corroborate or provide a unique perspective of children's symptoms and increase incremental validity of ratings (see Johnston & Murray, 2003 for a discussion).

Mothers' and fathers' SUD diagnosis and their interaction did not result in greater discrepancy in parents' reports of children's internalizing symptoms controlling for the other parent's reports. Again, our findings point to the importance of assessing depressive and anxiety symptoms in understanding parent discrepancy in reports of children's internalizing symptoms.

Limitations

There are limitations to the present study. First, the focus on families in which one or both parents had SUD and were willing to attend treatment may not represent many families in which parents have SUD but are not willing to attend treatment. Furthermore, the majority of families were White/Caucasian (~60%) and future research is needed among more diverse samples. Many other variables not examined here, such as relationship satisfaction or interparental conflict, may be associated with parent ratings. In addition, the impact of child symptoms on parental behavior, which has been demonstrated (e.g., Williams, Mitchell, Stringaris, & Liebenluft, 2014), was not examined. The sample size was low, thus we were unable to examine whether different types of SUD might reveal a differential pattern of findings. Future research replicating these findings, as well as longitudinal research on these families, is needed.

Our findings demonstrate the importance of gathering cross-informant data and recognize that multiple influences, such as mothers' own mental health symptoms, may be associated with parents' ratings of children's emotional symptoms. Further, our findings highlight the need for continued research addressing the father's role as an informant, especially in families affected by SUD.

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Table 1

Demographic Information for Mothers and Fathers

Variable	Mother			Father		
	Count (%)	M	SD	Count (%)	M	SD
Age in years	-	37.41	7.50	-	39.03	8.00
Ethnicity						
African-American	19 (19.59)	-	-	22 (22.68)	-	-
American Indian or Alaskan Native	1 (1.03)	-	-	4 (4.12)	-	-
Asian	1 (1.03)	-	-	0 (0.0)	-	-
Caucasian	59 (60.82)	-	-	57 (58.76)	-	-
Hispanic or Latino	4 (4.12)	-	-	7 (7.22)	-	-
Multicultural/Other	13 (13.40)	-	-	7 (7.22)	-	-
Married						
Yes	50 (48.5)	-	-	50 (48.5)	-	-
No	47 (51.5)	-	-	47 (51.5)	-	-
Years cohabitating	-	8.25	6.70	-	8.60	7.00
Years of education	-	13.56	2.41	-	12.70	2.36
Income (past 6 months)						
< \$20,000	67 (69.07)	-	-	50 (51.55)	-	-
\$20,000 to < \$40,000	17 (17.53)	-	-	22 (22.68)	-	-
\$40,000 to < \$60,000	7 (7.21)	-	-	13 (13.40)	-	-
> \$60,000	3 (3.09)	-	-	12 (12.37)	-	-
Missing	3 (3.09)	-	-	0 (0.00)	-	-
SUD diagnosis						
None	51 (52.58)	-	-	15 (15.46)	-	-
Alcohol only	11 (11.34)	-	-	26 (26.80)	-	-
Drug only	10 (10.31)	-	-	14 (14.43)	-	-
Alcohol and drug	25 (25.77)	-	-	42 (43.30)	-	-
Child age in years	-	10.97	3.85	-	10.97	3.85
Child sex						
Male	49 (51.04)	-	-	49 (51.04)	-	-

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Variable	Mother			Father		
	Count (%)	M	SD	Count (%)	M	SD
Female	47(48.96)	-	-	47 (48.96)	-	-

Table 2

Bivariate correlations and descriptive statistics among all study variables

	1	2	3	4	5	6	7	8	9	10	11	M	SD
1. Father Anxiety Symptoms	---											0.55	0.71
2. Father Depressive Symptoms	.74	---										0.87	0.77
3. Father Report of Child Internalizing Symptoms	.29	.30	---									6.39	7.45
4. Mother Anxiety Symptoms	.22	.13	-.07	---								0.77	0.76
5. Mother Depressive Symptoms	.15	.16	-.08	.83	---							1.41	0.99
6. Mother Report of Child Internalizing Symptoms	.01	.02	.36	.33	.34	---						7.88	6.93
7. Child Gender	.18	.06	.22	-.22	-.20	.14	---					0.50	0.50
8. Child Age	.11	.14	.14	.00	.02	.06	-.03	---				10.97	3.87
9. Father SUD	.22	.26	.07	-.04	-.05	-.10	.08	.18	---			0.85	0.36
10. Mother SUD	-.16	-.02	-.20	.15	.21	.04	-.02	-.22	-.17	---		0.47	0.50
11. Parent SUD Interaction	-.05	.12	-.17	.07	.12	-.01	.02	-.14	.33	.81	---	0.37	0.49

Note. Significant correlations ($p < .05$) are bolded for emphasis. Child gender was coded 0 = male, 1 = female; father/mother SUD was coded 0 = no SUD diagnoses, 1 = SUD diagnoses; parent SUD interaction was coded 0 = no interaction, 1 = SUD interaction (i.e., both parents have SUD diagnoses).

Table 3
Summary of unique associations of parents' reports of children's internalizing symptoms on parents' mental health symptoms

	Father Depressive Symptoms			Mother Depressive Symptoms			Father Anxiety Symptoms			Mother Anxiety Symptoms		
<i>Child Internalizing Symptoms</i>	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	<i>p</i>
Constant	0.38	0.50		.452	0.78		.207	0.51	0.45	.265	0.80	0.42
Mother Report	−0.04	0.09	−0.05	.656	0.42	0.11	<.001	−0.03	0.08	−0.04	0.30	0.08
Father Report	0.20	0.11	0.22	.090	−0.12	0.15	.422	0.12	0.10	0.15	−0.17	0.11
Mother X Father Report	−0.12	0.07	−0.23	.088	−0.10	0.09	.284	−0.11	0.06	−0.23	−0.01	0.07
Mother SUD	0.34	0.52	0.22	.515	1.16	0.59	.053	0.12	0.47	0.08	0.99	0.44
Father SUD	0.75	0.46	0.33	.104	0.93	0.53	.087	0.57	0.42	0.27	0.89	0.40
Parent SUD Interaction	−0.26	0.53	−0.17	.631	−0.92	0.62	.145	−0.34	0.49	−0.24	−0.93	0.47
Child Age	0.02	0.02	0.08	.488	0.01	0.03	.685	0.02	0.02	0.09	0.00	0.02
Child Gender	−0.06	0.16	−0.04	.725	−0.53	0.21	.012	0.12	0.15	0.09	−0.41	0.15
Model R ²			0.29	.009		0.29	.007			0.30	.006	.002

Note. Significant effects ($p < .05$) are in bold typeface for emphasis. For each of the four parent mental health outcomes, a separate regression model was conducted. Further, father income, mother income, father employment, mother employment were entered as covariates for all models. The effects of these covariates are available from the authors upon request.

Table 4
Summary of unique associations of parents' reports of children's internalizing symptoms with parents' SUD

<i>Child Internalizing Symptoms</i>	Father SUD				Mother SUD				Parent SUD Interaction			
	<i>b</i>	<i>SE</i>	β	<i>p</i>	<i>b</i>	<i>SE</i>	β	<i>p</i>	<i>b</i>	<i>SE</i>	β	<i>p</i>
Constant	0.76	0.15		<.001	0.90	0.22		<.001	0.62	0.19		.002
Mother Report	−0.06	0.04	−0.17	.156	0.78	0.07	0.16	.172	0.04	0.06	0.09	.443
Father Report	−0.03	0.06	−0.07	.608	−0.10	0.08	−0.17	.188	−0.12	0.08	−0.21	.114
Mother X Father Report	0.06	0.03	0.23	.097	−0.04	0.05	−0.11	.435	0.00	0.05	0.00	.997
Child Age	0.01	0.01	0.11	.305	−0.01	0.01	−0.06	.610	−0.01	0.01	−0.06	.604
Child Gender	0.06	0.08	0.09	.430	−0.02	0.11	−0.02	.850	0.01	0.11	0.01	.898
Model R ²			0.20	.058			0.21	.042			0.14	.176

Note. Significant effects ($p < .05$) are in bold typeface for emphasis. For each of the three parent SUD outcomes, a separate regression model was conducted. Further, father income, mother income, father employment, mother employment were entered as covariates for all models. Further, for specific parents SUD the other parents SUD was entered as a covariate. The effects of these covariates are available from the authors upon request.