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Mental Health Symptoms and Parenting Among Father-Only and Dual Substance Use Disorder Couples

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Abstract

In the present study, we examined associations between fathers' and mothers' mental health symptoms as related to their own and their partner's parenting in couples in which fathers ($n = 38$ families) or both partners ($n = 30$ families) had substance use disorder (SUD). Each partner reported on symptoms of depression, anxiety, and hostility; children reported on each parent's parenting behaviors, including acceptance, psychological control, and knowledge of children. Actor-partner interdependence models indicated that when substance-abusing fathers have more symptoms of anxiety and depression, non-substance-abusing mothers report greater knowledge of children, whereas non-substance-abusing mothers' mental health symptoms were related to less paternal knowledge of children. In dual SUD couples, mothers' depressive symptoms were associated with more paternal knowledge of children. These preliminary findings offer select support for family systems theory.

Keywords

substance use disorder; mental health problems; parenting

Introduction

Substance use disorder (SUD) is associated with lower levels of parental acceptance of their children (Conners-Burrow et al., 2015; Keller, Cummings, Davies, & Mitchell, 2008), more use of psychological control with children (Keller et al., 2008), and less knowledge of their

children (Bountress, Chassin, & Lemery-Chalfant, 2016). SUD is also associated with depression and anxiety among those diagnosed (Center for Behavioral Health Statistics and Quality [CBHSQ], 2015) and hostility (Hamdan-Mansour, Halabi, & Dawani, 2009; Hampson, Tidesley, Andrew, Luyckx, & Mroczek, 2010; Stover & Kiselica, 2014). It is possible that weaker parenting practices identified in parents with SUD may in part reflect their own mental health problems. Further, research with non-substance-abusing mothers and fathers has shown complex associations between partners' mental health symptoms and parenting behavior. Specifically, mothers and fathers may adjust their parenting to compensate for their partners' mental health problems and for their partners' lower involvement with children (Harvey, Stoessel, & Herbert, 2011; Zaslow, Pedersen, Cain, Suwalsky, & Kramer, 1985). In the present study, we examined how fathers' and mothers' mental health symptoms were associated with both their own and their partners' parenting behaviors (i.e., acceptance, psychological control, and knowledge) as reported by children among families with parental SUD. We further explored if these associations differed by whether only the father had a SUD or both parents had a SUD (i.e., moderation).

Mental Health Problems and Parenting

Schaefer (1965a, 1965b) conceptualized parenting into three dimensions: 1) psychological control, 2) acceptance, and 3) behavioral control. He conceptualized behavioral control as both parental discipline and knowledge of children. In the present study, parental knowledge is defined as mothers' and fathers' knowledge of children's whereabouts, activities, and peers.

Studies of mothers and fathers without SUD have demonstrated the importance of depression, anxiety, and hostility for their own parenting behavior. For instance, mothers' depression is associated with more negative interactions and less maternal nurturance and sensitivity (Kluczniok et al., 2015; see Zahn-Waxler, Duggal, & Gruber, 2002, for a review). Likewise, fathers' depression is associated with a significant decrease in positive parenting and a significant increase in negative parenting (Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007; Wilson & Durbin, 2010). Although some studies have not found associations between parental anxiety and parenting practices (Ginsburg, Grover, & Ialongo, 2004; Turner, Beidel, Roberson-Nay, & Tervo, 2003), other studies have found mothers' (Harvey et al., 2011) or both parents' anxiety (Kashdan et al., 2004) is related to negativity, inconsistency in disciplinary situations, and lack of warmth.

Mothers and fathers may also adjust their parenting to compensate for their partners' mental health problems. For instance, in families in which moderately depressed fathers displayed fewer parenting behaviors, mother-child interactions increased (Zaslow et al., 1985). In addition, mothers' anxiety was associated with fathers' reports of lower overreactivity to their children's misbehavior. That is, when mothers reported more anxiety, fathers responded to children's misbehaviors more rationally (Harvey et al., 2011).

Although parental hostility has received less attention than parental depression and anxiety, drug and alcohol use are associated with hostility (Hamdan-Mansour et al., 2009; Hampson et al., 2010; Stover & Kiselica, 2014). Denham et al. (2000) argued parental hostility is a form of chronic distress that may weaken parents' ability to respond effectively to children's

needs. Further, among children with high externalizing behavior scores, low levels of hostility and anger among fathers as well as supportive behavior and less anger among mothers discriminated between children whose behavior problems increased or diminished five years later, such that children whose behavior problems diminished had less hostile and more supportive parents.

Men's Alcohol Abuse and their Partners' Mental Health and Parenting

Among non-substance-abusing women with alcohol-abusing partners, men's alcohol consumption and alcohol-related problems are positively associated with women's reports of depressive symptoms and suicidal ideology (Tyagi & Mehta, 2013). In a large, population-based Norwegian study, alcohol-related problems, but not alcohol consumption, were associated with spouses' anxiety and depression (Rognmo, Torvik, Roysamb, & Tambs, 2013). Similarly, wives of men with alcohol use disorder are found to have poorer mental health than wives of non-alcohol-abusing men (Iqbal, Ahmad, & Rani, 2015). Moreover, women who have partners with alcohol problems are more likely to have mood and anxiety disorders even after controlling for demographic information and women's own illicit drug use (Dawson, Grant, Chou, & Stinson, 2007). Thus, men's alcohol use disorder, and the severity of men's alcohol use disorder, appears associated with their female partners' depression and anxiety.

Men's SUD is associated with more negative parenting among their female partners (e.g., Edwards, Homish, Eiden, Grohman, & Leonard, 2009; Eiden, Edwards, & Leonard, 2007; Tempier, Boyer, Lambert, Mosier, & Duncan, 2006). In addition, a parent's likelihood of having clinically elevated risk for child abuse is significantly higher when their partner has current or past substance use disorder (Ammerman, Kolko, Kirisci, Blackson, & Dawes, 1999). Likewise, living with a drug user is associated with greater likelihood of substance-abusing women not living with their minor children (Gilchrist & Taylor, 2009). Moreover, relative to community controls, opioid-dependent fathers reported more physical and psychological aggression toward the mother of their youngest child during the child's lifetime (Moore, Easton, & McMahon, 2011).

Relative to our understanding of the impact that men's alcohol abuse has on their female partners' mental health symptoms, we know far less about how non-substance-abusing women's mental health may impact their substance-abusing partner's mental health. Further, despite the fact that women with SUD often have partners with SUD (e.g., Grella, Scott, & Foss, 2005; Hser, Evans, & Huang, 2005), how mental health symptoms of mothers with SUD may be associated with fathers' mental health symptoms and parenting practices, is not known.

Family Systems Theory

One lens through which to view partners' influences on one another is family systems theory (Bowen, 1974). Family systems theory contends that families function as a system in which a problem or shift in the functioning of one family member is often unknowingly compensated for by another family member (e.g., Bowen, 1974; Broderick, 1983; Minuchin, 1974). For instance, a mother's likelihood of being reunified with a minor child after

substance abuse treatment is associated with her partner's support (Grant et al., 2011); suggesting the importance of male partners for parenting in families with substance abuse. Further, among non-substance-abusing couples, one partner's depression (e.g., Zaslow et al., 1985) or anxiety (e.g., Harvey et al., 2011; Zaslow et al., 1985) appears associated with more positive parenting in the other partner. Further, if mental health symptoms among fathers with SUD are associated with more acceptance and knowledge of children among mothers without SUD, this may be a natural extension of the strong normative commitment that many women place in their maternal roles (Moen & Smith, 1986). However, other research has demonstrated that men's SUD is associated with more negative parenting among their female partners (e.g., Eiden et al., 2007; Edwards et al., 2009; Tempier et al., 2006). It is possible that understanding their partner's mental health symptoms may help us clarify associations between mothers' and fathers' parenting in couples in which one or both partners have SUD.

Purpose

While both SUD (e.g., Conners-Burrow et al., 2015; see Mayes & Truman, 2002 for a review) and mental health problems (e.g., Goodman et al., 2011; Mustillo, Dorsey, Conover, & Burns, 2011) are associated with one's own parenting, typically, the literature on parental mental health symptoms and SUD are separate. In addition, despite calls for research on substance-abusing fathers (McMahon & Rounsaville, 2002; McMahon, Winkel, Luthar, & Rounsaville, 2005; Twomey, 2007), there has been slow progress in understanding the parenting practices among men with SUD. This lack of attention to fathers with SUD may reflect the tendency to consider parenting the domain of mothers. Thus, we examined the associations between fathers' and mothers' symptoms of mental health (i.e., depression, anxiety, and hostility) on both their own and their partners' parenting behaviors (i.e., acceptance, psychological control, and knowledge of children) as reported by the children. We further explored whether these associations differed by whether only the father had SUD or both parents had SUD (i.e., moderation). Although we expected that more mental health symptoms would be associated with poorer parenting for that specific parent (e.g., father depression → father acceptance), given the scarcity of research and inconsistency in study findings in the few existing studies, we did not have hypotheses regarding how one partner's mental health impacted the other partner's parenting behavior (e.g., mother depression → father acceptance). Further, we did not have any *a priori* hypotheses as to whether these associations would be stronger or weaker among father-only SUD families versus dual couple SUD families.

Method

Participants and Procedure

The present research is a secondary analysis of data from a larger study in which eligible couples could receive Behavioral Couples Treatment (BCT) for substance abuse (Author, 2016). To be eligible for the study, (1) one or both partners had to meet drug or alcohol abuse and/or dependence criteria for DSM-IV-TR Axis I Disorders (SCID; First, Spitzer, Gibbon, & Williams, 2010), (2) there was no history of severe partner violence as determined from items that assess injury on the Conflict Tactics Scale-2 (CTS-2; Straus,

Hamby, Boney-McCoy, & Sugarman, 1996), (3) family members had to speak fluent English, and (4) parents had to reside with the target child (i.e., for families with more than one child under the age of 18, the target child was the child with the closest birthdate to the initial screening). Couples were recruited via advertising at outpatient treatment centers specializing in substance abuse treatment, via community mental health providers, via flyers and postings in offices, in area newspapers, and at community events. Announcements indicated that adults who met study criteria were eligible to attend 12 free substance abuse counseling sessions with their partners. Mothers, fathers, and children were compensated \$30 each at pretreatment, then \$50 each for each of the follow-ups. The study was conducted in accordance with the code of ethics of the American Psychological Association and the participating research university's internal review board granted human subjects approval. Parents gave written consent for themselves and their children; children gave verbal assent. For the present study, we focused on data reported at the pretreatment assessment.

Although 88 triads (i.e., father, mother, and target child) completed the pretreatment assessment, only pretreatment data from families in which only the father had a SUD or both parents had a SUD ($n = 68$) are examined within this study. Among male partners, 36 men (52.94%) met DSM-IV-TR criteria for drug and alcohol diagnoses, 18 men (26.47%) met criteria for alcohol use only diagnosis, and 14 men (20.59%) met criteria for drug use only diagnosis. Among alcohol diagnoses ($n = 54$), 17 men were diagnosed with both alcohol abuse and alcohol dependence, 13 men were diagnosed with alcohol abuse only, and 24 men were diagnosed with dependence only. Nearly half of men diagnosed with drug dependence ($n = 50$), had dependency diagnoses for cannabis ($n = 24$; 48%), opioids ($n = 22$; 44%), and cocaine ($n = 24$; 48%). Among female partners, 18 women (26.47%) met DSM-IV-TR criteria for drug and alcohol diagnoses, 7 women (10.29%) met criteria for alcohol use only diagnosis, 5 women (7.35%) met criteria for drug use only diagnosis, and 38 women (55.88%) did not meet criteria for drug or alcohol use diagnosis. Among alcohol diagnoses ($n = 25$), 8 women were diagnosed with both alcohol abuse and alcohol dependence, 8 women were diagnosed with alcohol abuse only, and 9 women were diagnosed with dependence only. Among drug dependency diagnoses ($n = 23$), the near majority had drug diagnoses for cannabis ($n = 7$; 30.43%), sedatives ($n = 9$; 39.13%), opioids ($n = 13$; 56.52%), and cocaine ($n = 8$; 34.78%).

Taken together, there were a total of 38 families in which only the father had a SUD (i.e., father-only SUD families) and 30 families in which both parents had a SUD (i.e., dual couple SUD families). Couples reported living together an average of 9.10 years ($SD = 6.96$), and 27 (39.7%) of the couples reported being married. The mean age for children was 10.94 years ($SD = 4.17$); 32 (47.1%) children were girls. See Table 1 for a full description of the sample (age, race, income, and so forth) by partner gender.

Materials

Mental Health Symptoms—To assess mental health symptoms, each partner privately and separately completed 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 depression (e.g., ‘feelings of worthlessness,’ ‘feeling blue’), hostility (e.g., ‘temper outbursts that you could not control’), and anxiety (e.g., ‘feeling fearful’) were used for the current study. This scale has been found to be reliable and valid (Bech, Bille, Møller, Hellström, & Østergaard, 2014; Bergly, Nordfjaern, & Hagen, 2014). Item scores were summed to create a total score for each subscale such that higher values indicate higher reports for that symptom. Reliability for the present study was good to excellent for both fathers: depressive symptoms ($\alpha = .90$), anxiety symptoms ($\alpha = .89$), hostility ($\alpha = .85$), and mothers: depressive symptoms ($\alpha = .92$), anxiety symptoms ($\alpha = .85$), hostility ($\alpha = .82$).

Parenting Behavior—Parenting behaviors as reported by the child were assessed using the Children’s Reports of Parental Behavior Inventory (CRPBI; Schaefer, 1965b). The original 260-item version of the CRPBI, developed by Schaefer, has been revised multiple times into shorter versions. Schludermann and Schludermann (1970) created a 30-item version (used in the present study) which has excellent reliability and validity (see Polfuss, 2010 for a review). The CRPBI assesses three specific parenting practices: 1) use of *psychological control* via parents’ intrusiveness and attempts to manipulate the child through guilt or other negative means (e.g., ‘will avoid looking at me when I have disappointed her/him’), 2) *knowledge of children* via parents’ familiarity of whereabouts, activities, and peers (e.g., ‘where you are most afternoons after school’, ‘who your friends are’), and 3) *acceptance* (e.g., ‘smiles at me very often’, ‘cheers me up when I am sad’). Children rated the degree to which items were like their mother or father (assessed separately) on a scale of 1 to 3, with 1 = *very true*, 2 = *somewhat true*, and 3 = *not at all true*. Items were recoded so that higher scores reflected more use of psychological control, knowledge, and acceptance. Reliability for the present study was acceptable to good for both fathers: acceptance ($\alpha = .89$), psychological control ($\alpha = .56$), knowledge ($\alpha = .73$) and mothers: acceptance ($\alpha = .92$), psychological control ($\alpha = .68$), knowledge ($\alpha = .83$).

Statistical Analysis

After ensuring outcomes (i.e., children’s reports of parenting behavior) were relatively normally distributed and free of outliers, analyses were conducted in Mplus, version 7.2 (Muthén & Muthén, 1998–2012). To test hypothesized relationships, we first conducted three actor-partner interdependence models (Cook & Kenny, 2005). Each model examined the association between fathers’ mental health symptoms and both his own parenting behavior (actor effects) as well as the mother’s parenting behavior (partner effects) as reported by the child. Similarly, within the same model, we examined the association between mothers’ mental health symptoms and both her own parenting behavior (actor effects) as well as the father’s parenting behavior (partner effects) as reported by the child. Separate models were conducted for each mental health symptom: 1) depression, 2) anxiety, 3) hostility. Thus, three independent models were conducted in which both parents’ mental health symptom served as predictors of both parents’ behavior outcomes (e.g., father and mother depression → mother and father parenting outcomes). Within these models, the associations between parents’ mental health symptoms and children’s reports of parenting behaviors reflect unique effects (i.e., controlling for the other parent’s mental health symptoms).

We further conducted three additional actor-partner interdependence models to examine if the relationships between parental mental health and parenting behavior varied across family type (i.e., father-only SUD families and dual couple SUD families). We incorporated family type as well as its interaction with each parent's reported mental health symptoms as additional predictors to assess family type as a potential moderator of mental health effects. Within these models, parents' mental health symptoms (i.e., depression, anxiety, or hostility in separate models), family type (i.e., father-only SUD families vs. dual couple SUD families), and their interactions were entered as predictors of both parents' parenting behavior as reported by the child (e.g., father anxiety, mother anxiety, family type, father anxiety X family type, mother anxiety X family type; see Figure 1). Family type was entered using dummy effects coding (0 = father-only SUD families, 1 = dual couple SUD families) and parents' mental health symptoms were standardized prior to calculating the interaction term. Thus, the main effect for each parent's symptom is interpreted as the associations between that symptom and parenting behavior outcomes among father-only SUD families; while the interaction is interpreted as the change in strength of those relationships as one switches from a father-only SUD family to a dual couple SUD family.

We examined the unique effects of each predictor variable on outcomes for each model using bias-corrected bootstrapped estimates (Efron & Tibshirani, 1994) based on 10,000 bootstrapped samples, which is robust to small departures from normality (Erceg-Hurn & Mirosevich, 2008). Missing data (< 4%) were handled using full information maximum likelihood estimation, which is more efficient and has less bias than alternative estimation methods (Enders, 2001; Enders & Bandalos, 2001). Statistical significance was determined by 95% unstandardized confidence intervals that do not contain zero. See Table 2 for descriptive information for all study variables, as well as their bivariate correlations.

Results

Actor-partner Interdependence Models

Results for the first three actor-partner interdependence models can be seen in Table 3. While controlling for mothers' depressive symptoms, fathers' depressive symptoms were significantly associated with higher levels of mother knowledge ($\beta = 0.23$). Similarly, while controlling for mothers' anxiety symptoms, fathers' anxiety symptoms were significantly associated with higher levels of mother knowledge ($\beta = 0.35$). With regards to fathers' parenting outcomes, mothers' depressive symptoms ($\beta = -0.29$) and anxiety symptoms ($\beta = -0.30$), were significantly associated with lower father knowledge, while controlling for fathers' mental health symptoms. All other associations were not statistically significant (see Table 3).

Actor-partner Interdependence Moderated Models

Mother parenting behavior outcomes—Results for the three actor-partner interdependence moderated models can be seen in Table 4. While accounting for fathers' depression, mothers' depressive symptoms were significantly associated with lower levels of mother acceptance ($\beta = -0.37$) among father-only SUD families. However, this relationship (i.e., mothers' depression $\rightarrow$ mother acceptance) was significantly weaker in dual couple

SUD families, as evidenced by a significant interaction effect ($\beta = 0.32$). Further, while accounting for mothers' depression, fathers' depressive symptoms were significantly associated with higher levels of mother acceptance ($\beta = 0.51$) among father-only SUD families. This relationship (i.e., fathers' depression $\rightarrow$ mother acceptance) was maintained in dual couple SUD families (i.e., no significant moderation). With regards to mother knowledge, while accounting for mothers' anxiety, fathers' anxiety symptoms were significantly associated with higher levels of mother knowledge ($\beta = 0.64$) among father-only SUD families. However, this relationship (i.e., fathers' anxiety $\rightarrow$ mother knowledge) was significantly weaker among dual couple SUD families, as evidenced by a significant interaction effect ($\beta = -0.30$).

Father parenting behavior outcomes—While accounting for fathers' depression, mothers' depressive symptoms were significantly associated with lower levels of father knowledge ($\beta = -0.65$) among father-only SUD families. However, this relationship (i.e., mothers' depression $\rightarrow$ father knowledge) was significantly weaker in dual couple SUD families, as demonstrated by the significant interaction effect ($\beta = 0.39$). Further, while accounting for fathers' anxiety, mothers' anxiety symptoms were significantly associated with lower levels of father knowledge ($\beta = -0.55$) among father-only SUD families. This relationship (i.e., mothers' anxiety $\rightarrow$ father knowledge) was maintained among dual couple SUD families (i.e., no significant moderation). Finally, there were two significant main effects for type of family in the depression and anxiety models, such that father knowledge is higher in dual couple SUD families than in father-only SUD families ($\beta = 0.25$). This effect was not significant in the hostility model.

Discussion

Despite strong associations between SUD and mental health problems (CBHSQ, 2015; Grant et al., 2011), little research has examined how mental health problems of mothers and fathers in which one or both partners have SUD is associated with their own and their partners' parenting. Given the importance of effective parenting for lessening the risks for children of substance abusers (COSAs; Bountress & Chassin, 2015; Brook et al., 2002), we examined the associations between fathers' and mothers' mental health symptoms and both their own and their partners' parenting behaviors as reported by the children. We further explored if these associations differed by whether only the father had a SUD or both parents had a SUD (i.e., moderation).

Among families in which fathers had SUD and mothers did not, more symptoms of anxiety in fathers was associated with greater maternal knowledge of children. Also, more symptoms of depression in fathers were associated with greater maternal acceptance. These findings render some support for family systems theory. Specifically, in accordance with family systems theory, when substance-abusing fathers report more mental health symptoms, mothers' appear to adjust their parenting to balance her partners' parenting. Further, if mental health symptoms among fathers with SUD are associated with more acceptance and knowledge of children among mothers without SUD, this may be a natural extension of the strong normative commitment that many women place in their maternal roles (Moen & Smith, 1986).

In non-substance-abusing families, fathers' depression is associated with a significant decrease in positive parenting and a significant increase in negative parenting (Elgar et al., 2007; Wilson & Durbin, 2010). In addition, paternal anxiety is associated with less supervision of children (Johnson, Cohen, Kasen, & Brook, 2004). Extending previous research findings, we found that non-substance-abusing mothers appear to offset parenting of their partners with SUD and mental health problems. This finding supports previous research showing that when women with substance abuse live with a drug-abusing partner, they are less likely to live with their children (Gilchrist & Taylor, 2009). Thus, when mothers have SUD, it is possible that they are less able to compensate for their substance-abusing partners' depression and anxiety.

In contrast, fathers with SUD had less knowledge of children when their non-substance-abusing female partners had more symptoms of depression and anxiety. It is possible that even when non-substance-abusing mothers experience more mental health symptoms, they continue to have greater responsibility for their children's activities and behaviors. At the same time, extensive research has shown that maternal depression (e.g., Kluczniok et al., 2015; Zahn-Waxler et al., 2002) and anxiety (e.g., Harvey et al., 2011) are negatively associated with mothers' parenting practices. Further, parental anxiety/depression is associated with decreases in parental knowledge of adolescents one year later (Garthe, Sullivan, & Kliewer, 2015). In addition, parental knowledge of children is associated with lower levels of child internalizing symptoms (Garthe et al., 2015) and less likelihood of child substance use (Lippold, Greenberg, & Collins, 2014). Thus, it is possible that children whose non-substance-abusing mothers exhibit more mental health problems may be at greater risk for negative behaviors themselves as fathers may know less about their behaviors.

Mothers with more depressive symptoms were less accepting of children. This finding supports considerable research demonstrating associations between mothers and parenting (e.g., Kluczniok et al., 2015; see Zahn-Waxler et al., 2002 for a review). However, when both partners had SUD, this association was weaker. Thus, while mothers' depressive symptoms were associated with less maternal acceptance of children, mothers' own SUD was not associated with less warmth toward their children. Further, greater anxiety among fathers with SUD was positively associated with mother's knowledge of children; however, this association was tempered in families in which both parents met criteria for SUD. Thus, when mothers do not have SUD they may be able to compensate for their partners' mental health symptoms by maintaining greater awareness of their children; however, their own SUD may interfere with their ability to compensate for their partners' mental health symptoms.

As shown in Table 4, mothers' symptoms of depression and anxiety were associated with less paternal knowledge of children; however, the strength of the association between mothers' depressive symptoms and paternal knowledge of children was weaker when both parents had SUD. It is possible that when both partners have SUD, fathers may maintain more awareness of children relative to fathers whose female partners do not have a SUD. In part this may reflect there might be times when their mothers are not able to care for their children. Putting our findings together, some support was found for family systems theory

(e.g., Bowen, 1974; Minuchin, 1974) in that partners' parenting was often associated with one another.

Study Limitations

Certain limitations of this investigation should be noted. In order for COSAs to participate in this study, parents agreed to take part in a larger study in which they would receive substance abuse treatment. Parents who are willing to take part in substance abuse treatment may limit the generalizability of the findings. Additionally, all data were obtained contemporaneously, not allowing us to establish causal direction. Finally, the small sample size prohibited multi-group analysis to examine whether the associations between parents' reports of depression, anxiety, and hostility, and children's reports of mother's and father's parenting behaviors differed based on type of substance use disorder and children's developmental stage. In particular, the low sample size may have prohibited findings between hostility and children's reports of parenting behavior. Further research should also consider how methadone maintenance and varying severity of SUD could impact study outcomes. Despite these limitations, the strengths of the study include information from both parents, the ability to examine father-only SUD versus dual SUD couples, controlling for one's partners' parenting and other aspects of one's own parenting to better understand unique associations between various mental health symptoms and parenting, and children's reports of each parent's acceptance, psychological control, and knowledge of them.

Conclusions

Our findings indicate that when substance-abusing fathers have more symptoms of depression and anxiety, non-substance-abusing mothers may maintain greater knowledge of child and acceptance, whereas mental health problems among mothers may increase risk for children via lower level of father knowledge of children. Thus, mothers without SUD appear to compensate for their substance-abusing partners' mental health symptoms by having more acceptance and knowledge of children. When considering how mental health-parenting associations may differ for couples in which only men had SUD versus dual-SUD couples, there was some support that mothers' SUD may render them less able to adjust for their substance-abusing partners' mental health symptoms, whereas, when their substance-abusing partners' have more depressive symptoms, fathers may maintain more awareness of their children. In general, these patterns show select support for family systems theory in that one partner's mental health symptoms may be associated with the other partner's parenting practices.

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Figure 1.

Depicts the proposed actor-partner interdependence moderated models. Three independent models were conducted in which parents' mental health symptoms (i.e., depression, anxiety, or hostility), family type (i.e., father-only SUD families vs. dual couple SUD families), and their interactions were entered as predictors of both parents' parenting behavior (i.e., acceptance, psychological control, and knowledge of the child) as reported by the child.

Table 1

Demographic Information for Mothers, Fathers and Children

Variable	Mother			Father		
	Count (%)	M	SD	Count (%)	M	SD
Age in years	-	40.38	7.68	-	42.06	8.07
Ethnicity						
African-American	12 (17.64)	-	-	15 (22.05)	-	-
American Indian or Alaskan Native	1 (1.47)	-	-	2 (2.94)	-	-
Asian	1 (1.47)	-	-	0 (0.0)	-	-
Caucasian	41 (60.29)	-	-	41 (60.29)	-	-
Hispanic or Latino	3 (4.41)	-	-	5 (7.35)	-	-
Multicultural/Other	10 (14.71)	-	-	3 (4.41)	-	-
Married						
Yes	27 (39.7)	-	-	27 (39.7)	-	-
No	41 (60.3)	-	-	41 (60.3)	-	-
Years cohabitating	-	9.10	6.96	-	9.10	6.96
Years of education	-	13.75	2.54	-	12.84	2.42
Income (past 6 months)						
< \$20,000	43 (62.23)	-	-	33 (48.53)	-	-
\$20,000 to < \$40,000	16 (23.52)	-	-	18 (26.47)	-	-
\$40,000 to < \$60,000	6 (8.82)	-	-	10 (14.71)	-	-
> \$60,000	1 (1.47)	-	-	7 (10.29)	-	-
Missing	2 (2.94)	-	-	0 (0.00)	-	-
SUD diagnosis						
None	38 (55.88)	-	-	0 (0.00)	-	-
Alcohol only	7 (10.29)	-	-	18 (26.47)	-	-
Drug only	5 (7.35)	-	-	14 (20.59)	-	-
Alcohol and drug	18 (26.47)	-	-	36 (52.94)	-	-
Child age in years	-	10.85	4.29	-	11.02	4.05
Child sex						
Male	36 (52.29)	-	-	36 (52.29)	-	-

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Variable	Mother			Father		
	Count (%)	M	SD	Count (%)	M	SD
Female	32 (47.71)	-	-	32 (47.71)	-	-

Table 2

Bivariate Correlations and Descriptive Statistics among all Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	M	SD
1. M: Depression	---												17.41	12.22
2. M: Anxiety	.83	---											7.12	6.73
3. M: Hostility	.72	.74	---										5.10	4.27
4. M: Acceptance	.01	.05	.14	---									27.39	3.97
5. M: Psychological Control	.09	.06	.05	-.38	---								10.75	2.69
6. M: Knowledge	-.01	-.01	.06	.34	-.28	---							20.38	5.16
7. F: Depression	.33	.38	.40	.20	-.06	.23	---						13.07	10.40
8. F: Anxiety	.23	.40	.35	.18	-.11	.31	.78	---					5.86	6.92
9. F: Hostility	.40	.36	.42	.19	.16	.10	.62	.52	---				4.67	4.74
10. F: Acceptance	-.13	-.14	-.10	.38	-.26	.21	-.02	-.08	.01	---			24.23	4.87
11. F: Psychological Control	-.04	-.14	-.08	-.22	.56	-.05	-.06	-.07	-.00	-.17	---		10.74	2.33
12. F: Knowledge	-.28	-.30	-.29	.16	-.27	.50	-.05	-.12	-.26	.54	-.15	---	18.19	5.07

Note. M = Mother, F = Father. Significant correlations are bolded for emphasis and were determined by a 95% bias-corrected bootstrapped confidence interval (based on 10,000 bootstrapped samples) that does not contain zero.

Table 3
Summary of Unique Effects of Parents' Mental Health Subcomponents on Children's Reports of Parenting

	Mother Acceptance		Mother Psyc. Control		Mother Knowledge		Father Acceptance		Father Psyc. Control		Father Knowledge	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
<i>Depression</i>												
Mother	-0.06	-0.10, 0.04	0.14	-0.02, 0.09	-0.08	-0.13, 0.07	-0.14	-0.17, 0.05	-0.02	-0.05, 0.04	-0.29	-0.23, -0.03
Father	0.22	-0.02, 0.21	-0.10	-0.09, 0.04	0.23	0.01, 0.22	0.03	-0.11, 0.15	-0.06	-0.07, 0.04	0.05	-0.11, 0.15
<i>Anxiety</i>												
Mother	-0.02	-0.16, 0.12	-0.13	-0.04, 0.16	-0.14	-0.29, 0.08	-0.13	-0.31, 0.09	-0.13	-0.13, 0.05	-0.30	-0.41, -0.04
Father	0.18	-0.02, 0.26	-0.17	-0.04, 0.16	0.35	0.10, 0.43	-0.03	-0.20, 0.20	-0.02	-0.11, 0.08	0.00	-0.18, 0.21
<i>Hostility</i>												
Mother	0.08	-0.12, 0.27	-0.02	-0.17, 0.16	0.03	-0.24, 0.34	-0.13	-0.53, 0.19	-0.09	-0.18, 0.08	-0.22	-0.59, 0.01
Father	0.14	-0.08, 0.31	0.20	-0.13, 0.29	0.05	-0.24, 0.37	0.06	-0.22, 0.33	0.04	-0.14, 0.17	-0.17	-0.44, 0.07

Note. Psyc. = Psychological, CI = Confidence interval, and reflects bias-corrected bootstrapped confidence intervals around the unstandardized coefficient based on 10,000 bootstrapped samples. Significant effects are in bold typeface for emphasis, and were determined by unstandardized CIs that do not contain zero.

Summary of Unique Effects of Parents' Mental Health and Dual Users Interaction on Children's Reports of Parenting

Table 4

	Mother Acceptance			Mother Psyc. Control			Mother Knowledge			Father Acceptance			Father Psyc. Control			Father Knowledge		
	β	95% CI		β	95% CI		β	95% CI		β	95% CI		β	95% CI		β	95% CI	
Depression																		
Mother	-0.37	-3.86, -0.25		0.25	-0.46, 2.08		-0.23	-3.28, 1.60		-0.22	-3.47, 1.09		0.17	-0.57, 1.70		-0.65	-5.11, -1.42	
Father	0.51	0.08, 4.36		-0.16	-1.72, 0.86		0.37	-0.53, 3.88		0.16	-1.18, 2.75		-0.02	-1.24, 0.83		0.12	-1.12, 2.52	
Family Type	0.06	-1.88, 2.85		0.00	-1.58, 1.54		0.17	-0.99, 4.60		0.10	-1.52, 3.41		-0.05	-1.53, 1.07		0.25	0.22, 4.97	
Mother * Family Type	0.32	0.10, 4.37		-0.14	-2.19, 0.99		0.14	-2.11, 3.77		0.04	-2.66, 3.26		-0.26	-2.37, 0.47		0.39	0.63, 5.20	
Father * Family Type	-0.29	-4.34, 0.58		0.04	-1.39, 1.71		-0.16	-3.61, 1.44		-0.17	-4.17, 1.60		-0.11	-1.45, 0.96		-0.02	-2.58, 2.16	
Anxiety																		
Mother	-0.14	-2.95, 1.11		0.22	-0.60, 2.37		-0.37	-4.57, 0.36		-0.10	-3.41, 1.56		0.05	-0.83, 1.58		-0.54	-5.53, -0.89	
Father	0.28	-0.45, 3.16		-0.22	-2.05, 0.73		0.64	1.58, 5.49		0.05	-1.41, 2.94		-0.07	-1.53, 0.59		0.06	-1.34, 2.70	
Family Type	0.05	-1.68, 2.61		-0.00	-1.53, 1.50		0.20	-0.45, 4.74		0.06	-2.09, 2.94		-0.08	-1.59, 0.87		0.25	0.17, 4.87	
Mother * Family Type	0.14	-1.56, 3.65		-0.12	-2.44, 1.41		0.24	-1.25, 4.96		-0.08	-4.27, 2.64		-0.24	-2.67, 0.63		0.28	-0.37, 5.34	
Father * Family Type	-0.10	-3.00, 1.48		0.06	-1.37, 2.02		-0.30	-5.26, -0.22		-0.13	-4.72, 2.53		0.02	-1.45, 1.88		0.01	-2.87, 2.64	
Hostility																		
Mother	-0.05	-1.87, 1.86		0.11	-0.66, 1.59		-0.18	-5.19, 2.30		-0.03	-3.74, 2.25		0.07	-0.81, 1.21		-0.31	-5.82, 1.18	
Father	0.22	-1.07, 2.20		-0.11	-1.26, 0.57		0.40	-0.44, 5.01		-0.03	-1.92, 1.74		-0.05	-0.99, 0.66		-0.24	-3.35, 0.85	
Family Type	0.03	-1.74, 2.16		-0.01	-1.32, 1.47		0.16	-0.97, 4.55		0.04	-2.30, 3.02		-0.10	-1.56, 0.79		0.23	-0.18, 5.04	
Mother * Family Type	0.14	-1.52, 3.33		-0.09	-2.06, 1.43		0.14	-2.47, 5.65		-0.12	-5.02, 3.40		-0.17	-2.16, 0.66		0.08	-2.98, 4.92	
Father * Family Type	-0.05	-2.15, 2.00		0.34	-0.69, 2.64		-0.35	-6.05, 0.61		0.10	-2.29, 3.17		0.07	-1.35, 1.67		0.12	-1.82, 3.90	

Note. Psyc. = Psychological, CI = Confidence interval, and reflects bias-corrected bootstrapped confidence intervals around the unstandardized coefficient based on 10,000 bootstrapped samples. Significant effects are in bold typeface for emphasis, and were determined by unstandardized CIs that do not contain zero. Note that family type was dummy coded (0 = *Father-only SUD*, 1 = *Dual SUD*) where SUD = substance use diagnosis.