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The Relationship of Reflective Functioning to Parent Child Interactions in a Sample of Fathers With Concurrent Intimate Partner Violence Perpetration and Substance Abuse Problems

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Abstract

This study is the first to examine reflective functioning (RF) and direct parent-child interactions of fathers with concurrent intimate partner violence (IPV) perpetration and substance abuse (SA) problems. Twenty-four fathers, with children between the age of one and seven, completed a structured interview to assess RF, self-report measures of hostile-aggressive parenting behaviors, IPV perpetration severity, SA severity, and a coded play session with their children. Results of three simultaneous multiple regressions revealed that RF in fathers was not associated significantly with observed parenting behaviors. However, fathers' SA severity emerged as a significant predictor for child avoidant behavior and dyadic tension, and fathers' IPV perpetration severity contributed unique variance to child avoidant behavior and dyadic constriction. These results suggest that fathers' SA severity and IPV perpetration behaviors may be more salient factors in predicting their father-child interactions than paternal RF.

Keywords

parenting; domestic violence; father-child relationships; mentalization

A recent national survey indicated nearly 6.1% of children in the United States were exposed to intimate partner violence (IPV) in the last year (Finkelhor, Turner, Shattuck, & Hamby, 2013). Witnessing IPV has significant deleterious effects on children with those exposed at increased risk for child abuse (Edleson, 2001; Hamby, Finkelhor, Turner, & Ormrod, 2010) and a host of psychological and health related difficulties (Anda et al., 2006; Felitti et al., 1998; Kitzmann, Gaylord, Holt, & Kenny, 2003). Despite the preponderance of research indicating the negative outcomes associated with IPV on women and their children, fathers who perpetrate violence against their partners often continue to play a significant role in the lives of their partners and children even following arrest for IPV (Rothman, Mandel, & Silverman, 2007; Salisbury, Henning, & Holdford, 2009). Yet, little is known about the

parenting of these men outside of self or partner report measures. There is some evidence that men with histories of perpetrating IPV have more negative and hostile- aggressive parenting behaviors than men without such histories (Fox & Benson, 2004; Stover, Easton, & McMahon, 2013). Substance-abusing fathers and men who perpetrate IPV also demonstrate lower capacities to understand their children's mental states (i.e., reflective functioning), which has been associated with parental hostility and child withdrawal from interactions (Pajulo et al., 2012; Pajulo et al., 2009; Romero-Martinez, Lila, Sariñana-González, González-Bono, & Moya-Albiol, 2013). However, no studies to date have examined important factors such as reflective functioning (RF) and direct parent-child interactions in this understudied population of fathers. This study aims to be the first to examine both RF and observed behaviors during parent-child interactions of fathers with concurrent IPV perpetration and SA problems.

SA is a clear risk factor for IPV with a concurrence rate of up to 50% (Easton, Swan, & Sinha, 2000). Three separate reviews have concluded that alcohol and drug use increase the likelihood of IPV, though the association has been shown more clearly for alcohol than other drugs, and may depend on drug type (Klostermann & Fals-Stewart, 2006; Shorey, Stuart, & Cornelius, 2011). Importantly, IPV perpetration is between 2 and 11 times more likely to occur under conditions of drinking (Fals-Stewart, 2003; Moore, Elkins, McNulty, Kivisto, & Handsel, 2011). Given this significant overlap between IPV perpetration and SA, the likelihood that children who witness IPV are also exposed to a parent with SA problems is quite high. Understanding the unique features of the sub-population of IPV offenders is important to developing appropriate interventions that will benefit the men and their children.

It is also clear that men who perpetrate IPV often remain in the lives of their children. On average, women stay in violent relationships for eight years, and the majority (68%) of women resume relationships with the perpetrators upon leaving domestic violence shelters (Lerner & Kennedy, 2000; Martin et al., 2000). In fact, a community sample showed that 80% of IPV victims either resided, or remained in contact, with the perpetrator six months following a police reported incident (Israel & Stover, 2009). In addition, a large-scale study of nearly 4,000 men with IPV perpetration histories found that two-thirds of the men were fathers or father figures to minor children, whom they continued to maintain a relationship with following the abuse (Salisbury et al., 2009). Of note, nearly three-quarters of fathers with IPV perpetration histories reported that their father-child relationships were negatively impacted by their violence, and over half of the fathers expressed concern about the impact of their violence on their children (Rothman et al., 2007). Given that the majority of fathers with concurrent IPV perpetration and SA remain involved in their children's lives, there is a need to understand the parenting capacities of fathers with these histories more fully.

Over the last two decades, family researchers have demonstrated the relationship between parents' capacity to understand children's mental states and parenting behaviors. Reflective functioning describes the capacity of individuals to understand their own and others' actions as a function of underlying psychological and emotional states and motivations (Fonagy, Target, Steele, & Steele, 1998). Individuals with high levels of RF are better able to recognize their and others' thoughts, emotions, intentions, and desires (Fonagy, Steele,

Steele, Moran, & Higgitt, 1991). The ability to reflect mental states of oneself and others has been associated with healthier attachment styles, better interpersonal functioning, and improved emotion regulation (Fonagy & Bateman, 2006; Fonagy et al., 1998).

Despite the increasing research on RF and parenting behaviors, the vast majority of this research has been conducted with mothers. Using observational methods, researchers have found that higher levels of RF among mothers are related to more sensitive parenting (Fonagy, Gergely, Jurist, & Target, 2002; Fonagy & Target, 1997). Conversely, lower levels of RF among mothers have been associated with maternal hostility, intrusiveness, and withdrawal, children's tendency to withdraw from interactions, and dysfunctional dyadic interactions in studies that included observed parenting behaviors (Grienberger, Kelly, & Slade, 2005; Slade, Grienberger, Bernbach, Levy, & Locker, 2005). Fonagy et al. (2002) found that children have better emotional regulation, responsiveness, and pro-social behaviors when mothers demonstrate higher levels of RF. Maternal RF has also been associated with dyadic interactions characterized by higher levels of congruency and lower levels of frustration and stress (Fonagy et al., 2002).

Several studies have investigated the role of maternal RF in parenting behaviors among substance abusing mothers. The preponderance of studies indicate that substance-abusing mothers generally exhibit low maternal RF toward their children (Pajulo et al., 2012; Pajulo et al., 2009; Suchman, DeCoste, Castiglioni, Legow, & Mayes, 2008; Suchman, Mayes, Conti, Slade, & Rounsaville, 2004). Researchers propose that substance-abusing women tend to have lower levels of RF because their attachment histories often involve abusive or neglectful parenting and exposure to trauma, which result in the creation of defense mechanisms such as distortion and denial within the mothers (Suchman & Mayes, 2009). Emotional cues from the child are proposed to elicit the mother's defense strategies, thus interfering with her ability to recognize and respond sensitively to the child's cues. Following interventions targeted to improve maternal RF, mothers exhibit increased sensitivity, responsiveness, and fostering of social emotional and cognitive growth of children during videotaped interactions with their children (Suchman et al., 2008; Suchman et al., 2010).

Despite the growing research base on RF among mothers, the available studies investigating the role of RF in paternal parenting behaviors remains scarce. Available research suggests that the majority of healthy fathers have the capacity to reflect their infants' mental states and emotional needs (Madsen et al., 2007). When compared to first-time mothers, first-time fathers of infants have demonstrated similar capacities to understand their own mental states (self-related RF), which was related to infants' secure attachment styles independent of the infants' attachments to their mothers (Fonagy, Steele, & Steele, 1991). However, when assessing parents of clinically anxious school-aged children, mothers had better self-related RF abilities than fathers assessed by the Adult Attachment Interview (Esbjörn et al., 2013). In addition, mothers', but not fathers', RF was associated with children's anxiety levels. None of the prior studies specifically examined child-related RF or examined RF in relation to direct father-child observations.

In spite of growing evidence of the importance of RF in the parenting behaviors of substance-abusing mothers, there has been limited research on RF with fathers with SA problems. Qualitative analyses of Parent Development Interviews (Slade et al., 2004) coded for RF with a sample of 40 fathers with concurrent IPV perpetration and SA problems found the majority of substance-abusing fathers had RF capacities that fell within the “questionable” or “low” range, indicating that fathers exhibited limited abilities to reflect the emotional state of their children (Stover & Spink, 2012). Specifically, 72.5% of fathers demonstrated low reflective capacity in answering questions that assessed their experiences with feeling angry or guilty as a father. Additionally, although the majority of fathers were able to reflect on their parents’ parenting and the similarities and differences in their parenting compared to their parents, fathers did not recognize the linkage between their IPV perpetration and SA and their experiences with their own parents’ behaviors (Stover & Kahn, 2013). In addition to substance-abusing fathers demonstrating low levels of reflective functioning, research suggests that men who perpetrate IPV, compared to healthy controls, also have impaired capacities to understand the mental states of others (Romero-Martinez et al., 2013).

The one study to examine quantitatively the associations of paternal RF to parenting behaviors studied 79 fathers with young children and varying levels of IPV perpetration and SA histories (from none to significant) (Stover & Kiselica, 2014). This study found no significant differences between levels of RF for fathers with and without histories of IPV. However, father’s RF was associated with higher education and lower drug use. Importantly, RF was not significantly associated with fathers’ self-reported negative parenting behaviors. There was a small association between RF and positive discipline practices. The authors noted that there was limited range of RF in the sample which may have limited power to detect differences in RF related to parenting. Additionally, parenting behaviors were self-reported by the fathers (Stover & Kiselica, 2014). Previous studies have found small correlations between self-report and observed parenting behaviors (Feinberg, Neiderhiser, Howe, & Hetherington, 2001; Johnston, Scoular, & Ohan, 2004). Given the nonsignificant finding between fathers’ RF and self-reported negative parenting behaviors, whether a significant association exists between fathers’ RF and observed parenting behaviors and exploring the association between self-reported and observed parenting behaviors are areas for further investigation.

The current study was designed to further assess the association between RF and parenting of fathers with an independent sample via direct father-child interactions. As RF has been increased through targeted interventions with substance-abusing mothers to improve maternal sensitivity and parent-child interactions, determining the role of RF in fathers’ parenting and father-child interactions will inform the extent to which RF is related to parenting behaviors and dyadic interactions in substance-abusing fathers who perpetrate IPV. An inverse association between fathers’ low RF and maladaptive parenting interactions would warrant further consideration of including RF as a potential target for fathers seeking treatment to improve their parenting and parent-child interactions.

The current study sought to contribute to the extant literature by exploring the parenting behaviors, RF, and dyadic interactions of fathers with concurrent IPV and SA problems.

Given previous research demonstrating associations between parenting behaviors, RF, and parent-child interactions, we expected: 1) higher levels of RF would be associated negatively with self-reported hostile-aggressive parenting behaviors and maladaptive dyadic interactions, 2) there would be a small positive correlation between self-reported and observed parenting behaviors, and 3) SA and IPV perpetration severity would be positively associated with maladaptive dyadic interactions. Since low RF has been associated with maladaptive parenting behaviors and poorer quality dyadic interactions among mothers (Grienberger et al., 2005; Slade et al., 2005), we sought to determine if the same associations existed for fathers with concurrent IPV + SA. We hypothesized that: 1) there would be a small but significant association between self-reported parenting behaviors and observed parent-child interactions; and 2) RF would contribute unique variance in addition to severity of IPV and SA behaviors to negative parenting behaviors and poorer dyadic interactions during observations.

Method

Sample

The sample included 24 men who completed a baseline assessment for a small pilot evaluation of an intervention for men with concurrent IPV and SA. This is the first empirical study using these data. All participants had histories of concurrent IPV perpetration and SA problems, and they were the biological fathers of at least one child aged seven and younger with whom they had monthly or more contact. Fathers in the sample were 54.2% African American, 20.8% European American, 16.7% Latino, 4.2% Multiethnic, and 4.2% Other ethnicity. Fathers reported a mean age of 33.79 ($SD = 9.01$). Half (50%) of fathers were employed, and, on average, they had 12.25 ($SD = 1.39$) years of education. The target biological child had a mean age of 32.50 months ($SD = 25.56$) and 65.2% of the target children resided with their father. On average, fathers reported seeing their children several times a week over the last 12 months. Fathers' drug of choice included 60% alcohol, 33% cannabis, and 7% opiates.

Procedure

Fathers were recruited into the Fathers for Change Study by flyers and brochures posted in the Substance Abuse Treatment Unit of a Department of Psychiatry, Court Support Services Division, and the Department of Children and Families in the New Haven, CT area. Men were screened for the following eligibility: 1) biological father of a child aged seven and younger with at least monthly visitation, 2) DSM-IV criteria for substance abuse and use of that substance in the 60 days prior to interview, and 3) at least one incident of IPV (self or police reported) in the last six months. Fathers were recruited for participation in a randomized study of an intervention for fathers with concurrent IPV perpetration and substance abuse. If criteria were met, fathers met in person for a two-hour session with trained research assistants to complete informed consent and study measures. Fathers returned for a play session with their children within several days of the initial visit. If fathers had more than one child aged seven or younger, data were collected regarding their relationship and parenting behavior toward their oldest biological children with whom they

had at least monthly contact. Participants were paid \$50 for their time, and the study was approved by the university Institutional Review Board.

Measures

Fathers completed a series of demographic and family history questions. This was followed by a series of standardized measures of their relationship with their child's mother, parenting behavior, SA severity, and perceptions of child rearing, which are described in detail below.

The *Revised Conflict Tactics Scale* (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was administered to fathers to obtain a self-report measure of their use of violence in the last year with the mother of the target child. The physical assault subscale was used to assess the presence and severity of IPV. The CTS2 is the most widely used measure in the research literature on IPV. The measure demonstrated high internal consistency reliability for the current sample ($\alpha = .99$).

The *Parental Acceptance Rejection Questionnaire* (PARQ; Rohner, Khaleque, & Cournoyer, 2005) is a self-report measure with a scale that documents the frequency of hostile-aggressive parenting behavior. Respondents rate the occurrence of 15 different parenting behaviors along a 4-point scale. The measure has demonstrated good internal consistency and convergent, discriminant, and construct validity (Rohner & Kaleque, 2005). It has now been used in multiple studies with fathers who have perpetrated IPV and abused substances (McMahon, Winkel, & Rounsaville, 2008; Stover, Hall, McMahon, & Easton, 2012; Stover, Urdahl, & Easton, 2012). For this study, fathers were asked to rate the frequency of specific parenting behaviors occurring in their relationship with the target child, who participated in the play session. The measure demonstrated satisfactory internal consistency reliability for the current sample ($\alpha = .85$).

The *Addiction Severity Index 5th Edition* (ASI; McLellan et al., 1992) is an interview measure assessing the severity of substance use and problems. We used the ASI to determine frequency of alcohol and substance use (measured by the most frequently used drug class) in the past month. The ASI has been validated as an assessment instrument in a variety of populations (Makela, 2004), and self-reported drug use on the ASI has been shown to be comparable to drug detection by urinalysis (Denis et al., 2012).

The *Parent Development Interview-Revised* (Slade, Aber, Berger, Bresgi, & Kaplan, 2004) is a 40-item semi-structured interview that assesses fathers' reflections of child-rearing, of their child, and the ways they are like or unlike their own parents. The semi-structured interview was designed to extract the fathers' internal working models of relationships. In particular, questions outlined the fathers' thoughts and feelings about their child and their affective experience of parenting. Interviews were recorded and transcribed verbatim for scoring. Responses to each question were scored on a -1-9 scale, with higher scores indicating greater RF. Total scores for RF are derived from the items and are scaled in the same fashion as the individual items. The PDI has been validated in several different samples (Fonagy et al., 1991; Grienberger et al., 2005; Slade et al., 2004; Steele & Steele, 2008). The coder, a research assistant, for this study was blind to any information about the research participants. She received transcribed interviews for coding. She was trained to

reliability by the PDI developer. Coder reliability was obtained by attending a two-day training, completing 10 training/practice interviews, and then reliably coding 10 PDI interviews with an inter-rater reliability with the developer above .75.

The *Child Interactive Behavior Rating* (Feldman, 1998) is a rating scale developed to evaluate parents and their children participating in several structured play tasks based on the developmental level of the child. Tasks developed by Crowell and colleagues (Crowell & Feldman, 1988) were used in this study. Each child participated in four tasks, and different tasks were selected for children based on their age and developmental level. Two that were thought to be developmentally below the child's level and two that were considered advanced were given to each dyad. The aim was to select two tasks that the child could do easily and two that the child would be unable to do independently. Tasks included things like stacking blocks, shape sorting, ring stacking, stringing beads, and puzzles of various levels. Following 15 minutes of free play with toys, fathers were instructed to introduce the tasks to their children one at a time. They were instructed by the research assistant to put the task in front of the child and encourage the child to complete it.

These interactions were video recorded and coded by two research assistants that were trained coders using the Child Interactive Behavior Coding system. The global rating scheme yields 43 scales (22 adult, 16 child, and five dyadic scores) rated on a 5-point scale from 1 (*little*) to 5 (*much*). For the purposes of this study, eight scales were selected for inclusion in this study based on their theoretical relevance to the constructs (i.e., hostility and aggression) assessed by the self-reported parenting measure. Specifically, one adult (criticizing), one child (avoidance of parent), and two dyadic (tension and constriction) scales were included. The CIB has been used extensively to evaluate parent-child interactions across normal and at-risk samples in both US and international samples (e.g., France, Africa; Feldman, 1998). The CIB has good psychometric properties including construct validity with theoretically related constructs, predictive validity of children's adjustment, and up to two-year test-retest reliability (Feldman, 1998). Each coder who participated in the study achieved CIB coding reliability by attending a two-day training with the developer. They coded a set of practice interactions and then a set of 10 reliability interactions. A coder is deemed reliable if they attain .75 or higher with the codes given by the developer. In addition to this training, the two coders who rated the play interactions for this study double coded 20% of the interactions and attained reliability at .75 or higher for each of the nine scales used in this study.

Results

Preliminary Analyses

Overall fathers reported low levels of SA severity in the 30 days prior to baseline ($M = 4.35$, $SD = 8.92$), IPV severity (i.e., male to female physical aggression) in the past year ($M = 1.65$, $SD = 2.19$), and aggressive and hostile parenting behaviors ($M = 17.69$, $SD = 2.92$). The coded PDI interview revealed low levels of reflective functioning among fathers in this sample ($M = 3.08$, $SD = 0.72$). Fathers demonstrated low levels of criticizing ($M = 1.14$, $SD = 0.27$) behaviors with their children, and children demonstrated low levels of avoidance of

their fathers ($M = 1.44$, $SD = 0.70$) during coded interactions. The dyadic interaction was observed to be low in tension ($M = 1.33$, $SD = 0.56$) and constriction ($M = 208$, $SD = 1.25$).

Associations between Parenting Behaviors, Reflective Functioning, and Father-Child Interactions

The first set of hypotheses explored whether significant associations existed between parent and maladaptive father-child interaction variables. The maladaptive parenting variables included adult criticizing, child avoidance of parent, dyadic tension, and dyadic constriction. A correlation matrix of the independent and outcome variables is displayed in Table 1. Contrary to the study's hypotheses, there were no significant correlations between RF and fathers' self-reported parenting behaviors. Additionally, there were no significant associations between fathers' self-reported hostile and aggressive parenting behaviors and any of the observed father-child interaction variables. In support of the study hypotheses, the severity of fathers' IPV behavior was positively correlated with children's avoidance of parent ($r = .50$, $p = .018$) and dyadic constriction ($r = .60$, $p = .002$) observed during videotaped interactions. Severity of fathers' SA also correlated positively with children's avoidance of parent ($r = .46$, $p = .03$). Since child age, father educational attainment level, and father-child contact were not correlated significantly with the outcome variables, they were not controlled in the multivariate analyses to preserve power in our small sample.

The second set of hypotheses tested whether reflective functioning would be correlated with father-child interactions when controlling for severity of substance abuse and IPV. Three simultaneous multiple regressions were then conducted for each outcome variable as outlined in Table 2. All three models were significant; however RF did not contribute unique variance in any model. Substance abuse severity emerged as a significant predictor for child's avoidance of parent ($\beta = .41$) and dyadic tension ($\beta = .60$). Perpetration of IPV severity contributed unique variance to child's avoidance of parent ($\beta = .41$) and dyadic constriction ($\beta = .55$). Since RF was not correlated significantly with any of the father-child interaction variables, the second hypothesis was not supported. Post-hoc analyses revealed that power was sufficient for each of the models ($\beta > .80$).

Discussion

This was the first study to examine RF and parent-child interaction behaviors of fathers with concurrent IPV perpetration and SA problems with their young children. We found that there is no association between fathers' RF and parenting behaviors (self-reported or observed). There was also no association between fathers' self-reported hostile-aggressive parenting behaviors and their observed parenting behaviors and interactions with their children. However, fathers' severity of IPV perpetration and SA were related to negative father-child interactions including child's discomfort towards and avoidance of the parent. Dyadic interactions for fathers with higher levels of reported IPV perpetration, but not SA, were characterized by more constricted interaction with limited emotional expressiveness and enthusiasm (dyadic constriction). More severe SA, but not IPV perpetration, was associated with dyadic interactions that were characterized by more consistent discomfort and tension by both father and child (dyadic tension). These data provide preliminary support that in a

sample of fathers with IPV perpetration and SA difficulties, IPV perpetration and SA severity uniquely add to feelings of discomfort – IPV contributes stilted expressiveness, and SA contributes to overall tension in the interactions.

The finding that RF was not associated with father-child behaviors during observed interactions is contrary to previous findings suggesting the benefit of targeting RF in interventions to improve mother-child interactions (Fonagy et al., 2002; Fonagy & Target, 1997; Grienemberger et al., 2005; Slade et al., 2005). Previous literature suggests that women, compared to men, have better developed empathy and theories of mind (Ibanez et al., 2013; Rueckert, Branch, & Doan, 2011). Therefore, it is plausible that RF in fathers is less associated with parenting behaviors and childhood outcomes compared to mothers' RF abilities. One previous study found that unlike mothers, fathers' RF abilities were not related to children's anxiety levels (Esbjörn et al., 2013). Another study found that fathers' RF abilities were more weakly associated with infants' attachment styles than mothers' RF abilities (Fonagy et al., 1991). Fathers' RF abilities may not modulate their parenting behaviors or interactions with their children in the same way as do mothers' RF abilities. Using self-reported data, researchers found that RF in fathers was not related to their parenting behaviors (Stover & Kiselica, 2014). The finding that fathers' self-reported parenting behaviors was unrelated to RF was replicated in the current study using an independent sample from that used in Stover and Kiselica (2014). These data support the lack of association between fathers' RF and parenting behaviors and father-child interactions using observational methods, at least for men with histories of IPV perpetration and SA. Although there was not a significant correlation between SA and IPV perpetration severity and RF, since the sample had these issues as well as low RF, these issues may be intertwined. Further study with a larger sample of men with a range of RF, SA severity, and IPV perpetration severity will help disentangle the associations and better determine if focusing on RF may benefit fathers in intervention.

The finding that self-reported parenting behaviors were not associated with observed parenting behaviors was in contradiction to previous studies suggesting a small correlation between self-reported and observed parenting behaviors (Feinberg, Neiderhiser, Howe, & Hetherington, 2001; Johnston, Scoular, & Ohan, 2004). Although Johnston et al. (2004) found significant associations between parents' self-reported behavior and positive observed parenting behaviors, the researchers found weak support (i.e., only one significant association) between self-reported behavior and negative observed parenting behaviors. The current study's finding of no association between self-reported hostile-aggressive parenting and observed maladaptive parenting behaviors is consistent with the finding that associations are weaker for negative observed parenting behaviors (Johnston et al., 2004). As the dyadic interactions are video recorded, it is possible that reactivity and social desirability influenced the fathers' interactions with their children. In addition, the short duration of the interaction offered limited opportunities for negative parenting behaviors to be displayed, and the recorded interactions may not have been of sufficient length for the influence of reactivity to be minimized.

It is interesting to note that although greater severity of IPV perpetration and SA were both associated with child's avoidance of the parent, IPV perpetration and SA severity were

associated with unique areas of dysfunction in the father-child interactions. Perpetration of IPV was associated with less positive dyadic interactions, whereas SA severity was associated with a mutual tenseness and discomfort in the dyadic relationship. Interactions with fathers with a history of IPV perpetration may be stilted given the child's uncertainty of predicting what may incite the father's aggression or hostility. Given that children who witness IPV are at increased risk for childhood physical abuse (Edleson, 2001; Hamby et al., 2010), it is also possible that children's avoidance of their father and inhibited interactions may be related to fathers' violence directed toward the target children. It is possible that SA severity may reduce contact and stability between the father and child, resulting in less comfortable interactions between the dyad; however, the expressiveness in their interactions remains uncompromised. This finding is consistent with a study examining the unique contributions of SA severity and IPV perpetration to negative parenting behaviors of men, which found that IPV perpetration but not SA severity was associated with more hostile-aggressive and rejecting parenting behaviors (Stover & McMahon, 2014). These studies indicate that in statistical models that allow for the consideration of the unique contribution of both SA and IPV to parenting behaviors, different areas of intervention may be revealed.

Consistent with other studies, the majority of children in the current sample continued to reside with their father following the perpetration of IPV incidents. Paired with the pattern of results indicating the important contribution of IPV perpetration severity to father-child interactions within a population of fathers, for whom all had at least one incident of IPV perpetration and were abusing alcohol or drugs, study findings suggest the importance of assessing IPV perpetration severity and how IPV behaviors may impact father-child relationships. Integrated interventions that focus on fatherhood specifically for men with IPV perpetration and SA are needed and indeed are showing early promise in both decreasing IPV perpetration and SA behaviors and also improving parenting outcomes (McMahon, 2009; Stover, 2013; Stover, 2015). Further exploration of how to intervene with fathers with concurrent IPV perpetration and SA problems especially in the context of their dyadic interactions with their children is needed.

These data also support prior findings indicating identification of IPV perpetration behaviors signal risk for less positive and more negative parenting and father-child interactions (Fox & Benson, 2004; Litton Fox, Sayers, & Bruce, 2001; Stover, Easton, & McMahon, 2013). Interventions to improve parenting and father-child relationships for this population may be most effective if they target mechanisms of action for IPV perpetration and SA problems such as poor affective regulation skills, lack of coping skills, hostile thinking, and psychiatric symptoms in addition to parenting skills (e.g., Handelsman et al., 2000; Stover, Easton, & McMahon, 2013; Stover & Kiselica, 2014). Improvement in IPV perpetration and SA via improvement in these target mechanisms of action may then improve parenting.

Limitations

Although this study contributes important information to the field as the first to examine RF and observed parenting behaviors among fathers with concurrent SA and IPV perpetration, several limitations must be noted. Foremost, the sample size is small for multiple regression models, which may have resulted in reduced power for detecting significant associations.

However, post-hoc analyses revealed that the statistical power in our models exceeded what would be necessary to find a significant effect given the strong association with our predictor and outcome variables. In addition, there was limited variability in the RF variable. It is possible that the limited range of scores congregated on the low end of possible scores contributed to RF not being associated significantly with parenting behaviors or father-child interactions in this sample. Since the current sample was limited to a small group of fathers with RF characterized as low, a greater range of RF scores using a larger sample may yield different findings.

Given that mean SA and IPV perpetration severity was in the low range and the father-child interactions were generally characterized as positive with limited hostility or other negative indicators, it appears the fathers referred to the Fathers for Change study by the courts and other community agencies may be a less severe and higher functioning set of fathers than would be typical of the full range of substance abusers and IPV offenders. Severity of SA and IPV perpetration were based solely on the fathers' reports. It is plausible that fathers in this study underreported the severity of their SA and IPV perpetration and exhibited more positive parent-child interactions than is typical in their everyday lives at home, suggesting possible social desirability or response bias. As fathers' interactions with their children were video recorded, observation bias may also have influenced their play.

Lastly, our sample predominantly included minority, low-income fathers who had histories of SA problems and IPV perpetration who were referred and agreed to participate in a treatment study focusing on fatherhood. Father-child interactions and their relation to RF may reveal different patterns among fathers without these histories or with those who are not treatment seeking. Findings from the study should not be generalized beyond this subset of fathers, and results of the study should be interpreted with caution given the small sample size and restricted range of variables. Additional studies with larger samples and a wider range of variability in the key study characteristics are needed to determine if these results are consistent and generalizable to the wider population of fathers with concurrent IPV perpetration and SA problems. Given the paucity of literature on RF and observed parenting behaviors, especially among high risk fathers, this study offers valuable initial findings into these relationships despite the abovementioned limitations.

Conclusion

Although the current study had several limitations, it extends the extant knowledge of father-child interactions among fathers with concurrent SA and IPV perpetration. This study provided preliminary evidence that RF may not be as important a factor as SA and IPV perpetration severity in predicting father-child interactions among fathers with young children. Given the independent contributions of SA and IPV perpetration severity on father-child interactions, parenting programs should include targeted interventions to reduce the frequency and severity of SA and IPV perpetration among fathers with young children to improve the quality of their relationships with their children. The study highlights the benefit of parenting programs that address both substance abuse and IPV perpetration with fathers given their high concurrence and unique associations with maladaptive dyadic interactions. Although this study found no associations between RF and observed father-child

interactions, further exploration of the contribution of RF to paternal parenting is needed given the limited range of RF in the current study.

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Table 1

Summary of Intercorrelations for RE, SA, IPV, and Father-Child Interactions (N = 24)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. Reflective Functioning	-										
2. Substance Abuse	.18	-									
3. Intimate Partner Violence	-.26	.05	-								
4. Hostile-Aggressive Parenting	.21	.02	.16	-							
5. Child Avoidance of Parent	-.31	.46*	.50*	-.14	-						
6. Dyadic Tension	-.16	.40	.30	-.12	.97***	-					
7. Dyadic Constriction	-.37	.02	.60**	-.18	.62**	.55**	-				
8. Adult Criticizing	-.32	.14	.05	-.09	.27	.41*	.37	-			
9. Child Age in Months	.42	.26	-.11	.17	.10	.07	-.10	.09	-		
10. Father-Child Contact	-.38	-.25	.27	.20	.20	.12	.24	.03	-.21	-	
11. Fathers' Education	.21	.13	.23	.53***	-.02	-.14	.08	.16	.25	.00	-

Note.

*
 $p < .05$.**
 $p < .01$.***
 $p < .001$.

Table 2

Multiple Regression Analyses predicting Father-Child Interactions (N = 24)

	Child Avoidance of Parent		Dyadic Tension		Dyadic Constriction	
<i>F</i>	4.89 [*]		5.57 ^{**}		4.57 [*]	
<i>R</i> ²	.46		.48		.43	
Predictor	<i>B</i>	SeB	<i>B</i>	SeB	<i>B</i>	SeB
Reflective Functioning	-.24	.20	-.14	.13	-.43	.34
Substance Abuse	.04 [*]	.02	.03 ^{**}	.01	.01	.02
Intimate Partner Violence	.13 [*]	.06	.06	.04	.29 ^{**}	.01

Note.

^{*} $p < .05$.

^{**} $p < .01$.

^{***} $p < .001$.