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Fathers Entering Substance Abuse Treatment: An Examination of Substance Abuse, Trauma Symptoms and Parenting Behaviors

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Abstract

Objective—The relationship between fatherhood and both psychiatric distress and severity of substance abuse (SA) among men entering SA treatment has not been well explored. This study was designed to (a) examine differences in symptoms of men presenting for SA assessment based on fatherhood status and (b) determine how PTSD symptoms and severity of SA were associated with parenting for men who were fathers.

Methods—PTSD symptoms, severity of SA and parenting data reported on structured questionnaires were collected from 126 men presenting for an SA evaluation at a forensic drug diversion clinic.

Results—There were no differences in severity of alcohol or drug use between fathers and non-fathers; however fathers with more PTSD symptoms reported greater severity of alcohol and drug use. Among the fathers, PTSD symptoms correlated significantly and positively with negative parenting behaviors, while SA did not. Fathers with more significant PTSD symptoms were more likely to want help with parenting.

Conclusions—Further exploration of the impact of trauma related symptoms on the parenting behaviors of substance-abusing men is warranted.

1. Introduction

A substantial literature exists related to treatment initiation and efficacy for substance-abusing men; yet, the role of fatherhood and parenting and its implication for substance abuse treatment has been largely ignored (McMahon & Rounsaville, 2002). Within the last several decades, policy initiatives have focused on pregnancy and motherhood in the treatment of substance-abusing women, resulting in the development of specialized treatment programs for mothers that target not only substance abuse, but co-morbid trauma related symptoms (Covington, 2008; Najavits, Weiss, Shaw, & Muenz, 1998), parenting and

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childcare (Kumpfer, 1991). Programs that incorporate components specifically for women (child care, prenatal care, women-only programs, supplemental services and workshops that address mother-focused topics, trauma focused programming) result in increased treatment completion, decreased use of substances, reduced mental health symptoms, and improved birth outcomes (Ashley, Marsden, & Brady, 2003; Covington, 2000, 2008; Covington & Bloom, 2007; Covington, Burke, Keaton, & Norcott, 2008; Najavits, et al., 1998). Similar focus on male-specific responses to parenthood and trauma-related symptoms may yield improved outcomes for fathers, but limited work has been done in this area to date.

The role of parenting and fatherhood for alcohol and drug-abusing men has received relatively limited attention when compared to the research on motherhood and the same issues. McMahon and colleagues (McMahon, Winkel, Luthar, & Rounsaville, 2005) showed that approximately 55% of the men seeking drug abuse treatment over the course of a 12 month period were the biological fathers of an average of two children. Most of the fathers were already drug-dependent when their first child was born, and at the time they were seeking treatment, only 20% of them were living with any of their biological children. In a sample of 50 fathers on methadone maintenance, 72% were actively using drugs and only 26% were receiving treatment at the time of their youngest child's birth. Seventy percent of the fathers were present at the hospital when their youngest child was born and 86% did or had lived with that child. Of concern, 60% acknowledged being intoxicated at some point while caring for their child (McMahon, Winkel, Suchman, & Rounsaville, 2007). A study examining men receiving court-mandated substance abuse treatment at a community substance abuse treatment facility found 68% of the men had a least one biological child and 30% had custody of a child under the age of 18 (Stover, McMahon, & Easton, 2010).

Collins and colleagues examined parental involvement of substance-abusing parents in substance abuse treatment and found the majority of fathers (51%) in the sample were classified as being highly involved with their children. Fathers who were more involved with their children showed lower levels of addiction severity at baseline assessment than less involved fathers, and parents who were less involved with their children reported experiencing more stress at 12-month follow-up (Collins, Grella, & Hser, 2003). This study did not compare differences in baseline symptoms and substance use for fathers and non-fathers, nor did it examine specific parenting behaviors of fathers that may be in need of intervention. It is possible that fatherhood may play a unique role in substance abuse severity and other psychiatric symptoms for men entering treatment that could be an additional target for treatment goals and intervention.

Studies comparing the parenting of substance abusing fathers to non-substance abusing fathers indicate some differences in parenting behavior and father-child relationships, yet little of the co-morbidity of other psychiatric symptoms and their relationship to negative parenting has been explored. Several studies by Eiden and her colleagues have shown alcoholic fathers to have more negative emotion during father-child interactions and more negative attitudes toward their infants and young children compared to non-alcoholic fathers (Edwards, Eiden, & Leonard, 2004; Eiden, Chavez, & Leonard, 1999; Eiden, Edwards, & Leonard, 2002; Eiden & Leonard, 2000). El-Sheikh and her colleagues (El-Sheikh & Buckhalt, 2003; El-Sheikh & Flanagan, 2001) noted that paternal alcoholism was associated with similar father-child relationship difficulties with school-age children. For adolescents, both Zhou, King, and Chassin (2006) and Jacob and colleagues (Jacob, Kahn, & Leonard, 1991) found less family cohesion and similar problems in parent-child interaction for families with substance abusing fathers. Additionally, fathers with a history of alcohol and drug abuse report higher levels of parenting stress and poorer father-child communication (Blackson, et al., 1999), which likely contributes to the more negative father-child relationships.

Contrary to this, McMahon, Winkel, and Rounsaville (McMahon, Winkel, & Rounsaville, 2008) recently showed that, although the scope of their paternal involvement was limited, there were no significant differences in the frequency of positive or negative parenting behavior reported by opioid-dependent men compared to fathers with no history of alcohol or drug abuse. Although there are some discrepancies in the current research literature in terms of the impact of paternal alcohol and drug use on parenting, most of the studies reviewed did not examine symptoms of other psychiatric conditions that might be contributing to poor parenting outside substance abuse alone. Those that did focused on antisocial personality features and affective disorders such as depression. Depression has been shown to mediate the association between paternal alcoholism and parenting sensitivity, while aggression and antisocial characteristics did not moderate the association between alcoholism and negative parenting (Eiden et al., 1999). These studies suggest further exploration of other co-morbid psychiatric symptoms and psychopathology that may be contributing to poor parenting of substance abusing fathers is warranted (Eiden et al., 1999; Eiden & Leonard, 2000).

One such psychiatric condition that co-occurs frequently with substance use disorders (SUDs) is posttraumatic stress disorder (PTSD). Several recent studies have reported rates of PTSD in adults with SUDs to be 33-50% (Chilcoat & Menard, 2003; Ford & Smith, 2008). Rates have typically been thought to be lower for men at about 15% (Najavits, Weiss, & Shaw, 1997), yet, some studies have not found gender differences in rates of co-morbidity of PTSD and SUDs (Brown, Stout, & Mueller, 1999). There is evidence to suggest that men's trauma exposure leads to a different symptom picture than women's, with men showing more hostility and aggression (Griffin, 2009). This would imply the combination of trauma-related symptoms and substance abuse among men would result in significant negative fathering behaviors.

Examination of the research related to the impact of PTSD symptoms on parenting and the father-child relationship reveals a dearth of literature. Two studies of military veterans found significant negative associations between PTSD severity and parenting satisfaction (Ruscio, Weathers, King, & King, 2002) and father-child relationship quality (Samper, Taft, King, & King, 2004). Yet, an examination of PTSD symptoms, that may be associated with both the severity of substance abuse and parenting behaviors, has not been explored to our knowledge in a non-veteran sample of men entering substance abuse treatment. Given the high co-morbidity of substance abuse with posttraumatic stress, and some literature suggesting negative parenting behaviors in substance-abusing women and poor child outcomes are more clearly associated with psychiatric symptoms and personality traits (depression, anxiety, PTSD, antisocial personality) than drug use (Hans, Bernstein, & Henson, 1999; Johnson, Nusbaum, Bejarano, & Rosen, 1999; Kettinger, Nair, & Schuler, 2000; Luthar & Sexton, 2007), examination of such co-occurring symptoms in fathers and the impact on negative parenting is warranted.

The primary aims of this study were to (a) affirm a relationship between severity of PTSD symptoms and severity of drug and alcohol abuse within a population of men referred from the criminal justice system for a substance abuse assessment, (b) examine whether men who were fathers reported differing levels of drug and alcohol abuse severity, (c) determine if the relationship between severity of PTSD symptoms and severity of drug and alcohol abuse differed for men who were fathers when compared with those who were not, and (d) explore the parenting behaviors of fathers in the sample to determine if severity of alcohol and drug abuse and PTSD symptoms correlated positively with negative parenting behavior. Given the limited previous research on fatherhood and its relationship to the severity of substance use and PTSD symptoms, it was hypothesized that there would be a difference in PTSD symptoms and substance abuse for fathers versus non-fathers, but we did not have a priori

predictions about the direction of that difference. It was hypothesized that more severe alcohol and drug abuse and greater PTSD symptoms would be associated with more negative parenting behaviors for men who were fathers.

2. Materials and methods

2.1 Sample

The sample included 126 consecutive admissions of men applying for a substance abuse assessment at a Forensic Drug Diversion Clinic from January 2009 to July 2010. Men were referred for substance abuse evaluation and, when indicated, treatment due to court involvement.

2.2 Procedure

Participants completed paper and pencil questionnaires and clinicians gathered demographic and urine toxicology samples from men at the time of their initial appointment at the clinic. Data were compiled by trained research assistants and entered into an SPSS database. The study was approved by the Yale University School of Medicine Human Investigations Committee.

2.3 Measures

Data included basic demographic characteristics (age, ethnicity, living with significant other, relationship status, employment, fatherhood status, and number and ages of biological children) and responses to specific questions about (a) whether they would be interested in a parenting class, (b) had concerns about their child, or (c) wanted to discuss fatherhood as part of their treatment (coded as 1 = yes and 0 = no). Additionally, men completed paper and pencil questionnaires related to their substance use, mental health symptoms and parenting behaviors on the following standardized measures:

The Michigan Alcohol Screening Test (MAST) is a 25- question self-report instrument (Selzer, 1971) that was used to assesses severity of alcohol abuse. This test was originally designed as a screening instrument for alcoholism; however, today it is used more widely as a severity index for alcoholism. Each item utilizes weighted scoring, with two of the items amounting to the number of times an event occurs. Scores range from 0 to 22 with scores of 6 and above indicating a problem drinker. The MAST has shown high validity as both a screening test and as a measurement of severity in alcoholism (Westermeyer, Yargic, & Thuras, 2004).

The Drug Abuse Screening Test (DAST; Skinner, 1992) is a self-report questionnaire designed to assess drug use problems. It consists of 28 yes/no items indicative of symptoms of drug abuse and dependence. Items are weighted 0 or 1, and responses are summed to yield a total score ranging from 0 to 28, with higher scores indicating more severe drug use problems. The DAST has shown good reliability and validity (Cocco & Carey, 1998; El-Bassel et al., 1997; Lin, Lee, Pan, & Hu, 2003; McCann, Simpson, Ries, & Roy-Byrne, 2000).

A 4-panel *urine screen for toxicology* was used as a laboratory measure of drug use (Roche Test cup, Roche Diagnostics). An adultacheck- 4 (Roche Diagnostics) was utilized to assess the validity of the onsite urine screen. Adulterants that were ingested or added to the urine could be detected. This additional test was utilized to detect false-negative urine screens. Toxicology results documented from urine screening were coded as positive (1) or negative (0) for each of the four drugs: cocaine, cannabis, opioids, and amphetamines).

PTSD Symptom Scale—This scale is a 17-item questionnaire, with a 4-point Likert scale (0=not at all, 1=once a week/a little bit/once in a while, 2=2-4 times per week/somewhat/half the time, 3=5+ times per week/very much/almost always), that asks individuals to rate the frequency and intensity of symptoms over the past two weeks. Responses to the questions allow for rating of DSM-IV symptoms for PTSD, including (a) intrusions, (a) re-experiencing, (c) avoidance and numbing, and (d) increased arousal. A symptom is counted present if the item rating is greater than 1. The total score is comprised of the sum of symptoms and ranges from 0 to 51 (Elhai & Simons, 2007; Naifeh, Elhai, Kashdan, & Grubaugh, 2008). Scores of 13 or higher indicate probable PTSD. The PSS does not measure lifetime PTSD but has strong levels of reliability and validity (Blake et al., 1995). For purposes of this study, fathers indicated whether they had any previous history of a traumatic event, but were not required to disclose the nature of the event. They were then asked to complete the symptom questions. The total score was used as the measure of trauma related symptom severity, but was not used to diagnose PTSD in this study since we did not assess whether they met DSM-IV criterion A1 or A2. The PTSD Total scores for those who reported no history of a traumatic life event was set at 0.

The Parental Acceptance Rejection Questionnaire-Short Form (PARQ; Rohner & Khaleque, 2005) is a 24-item, self-report measure that documents frequency of (a) warm-affectionate, (b) hostile-aggressive, (c) rejectful, and (d) neglectful parenting behavior. Respondents rate the occurrence of different parenting behaviors along a 4-point scale that ranges from *Almost never true* (0) to *Almost always true* (3).

2.4 Analytic Strategy

First, descriptive statistics for the total sample were generated, along with correlations of all study variables. Next, chi-square tests of association and t-tests were used to test for differences in demographic characteristics (age, living with significant other, ethnicity, and employment) and trauma/PTSD variables when fathers were compared to non-fathers on demographic variables. Next, multivariate analysis of variance (MANOVA) was used to test for differences in severity of drug and alcohol abuse (MAST and DAST total scores) when fathers were compared with non-fathers. Then, fatherhood, PTSD symptom severity scores and the interaction of fatherhood and PTSD symptoms were entered into a MANOVA as independent variables to test for differences in alcohol and drug use severity. This was followed by post hoc analyses of covariance (ANCOVAs) to determine which dependent variables were accounting for statistically significant multivariate findings. This was done by entering each dependent variable as a covariate for the other (step-down analysis). Then, binary logistic regression was used to assess the same set of independent variables with urinalysis drug screen results (positive or negative) as the criterion variable. Last, linear regression modeling was used to examine potential correlates (age, employment, and living with child, drug abuse severity, alcohol abuse severity and posttraumatic symptom severity) of negative parenting behavior among the men who were fathers.

3. Results

3.1 Preliminary Analysis

The sample included 78 men who were fathers of a child under the age of 18 and 48 men who had no children. The mean age of the entire sample was 33.97 years ($SD = 10.37$) with an average of 12.34 years ($SD = 2.01$) of education. Fifty percent of the sample was employed at least part-time. Men were primarily African American (47.4%) and Caucasian (37.1%) with a small percentage Hispanic (13.4%) and other ethnicity (2%). Men reported a mean of 6.24 days ($SD = 7.76$) of drinking in the last month. Fifty-two percent reported alcohol as their primary drug of choice with the mean number of days drinking slightly

higher for those men ($M = 7.3$, $SD = 7.76$) with a range of 0 to 30 days. Twenty-nine percent reported cannabis as their primary drug of choice followed by cocaine at 6.5%. Only 3% of men reported use of opioids, PCP or multiple substances. Seven percent of the sample denied significant abuse of drugs or alcohol despite a substance abuse-related arrest. This is consistent with the sample of men typically presenting for evaluation within the court referred forensic drug diversion clinic. Sixty-four percent of men were referred for evaluation due to an arrest for domestic violence while under the influence of alcohol or drugs. Others were referred by courts or probation due to other substance-related charges or failed urine screenings as part of their probation requirements.

Means and standard deviations for all study variables for the entire sample and by fatherhood group can be found in Table 1. Fifty four percent of men endorsed a history of a traumatic life event, but the exact nature of those events was not reported as men typically chose not to answer this question. The PTSD scale was administered so that men could leave the nature of their trauma blank, but still complete the trauma symptoms questions. Men were more forthcoming about trauma symptoms but were uncomfortable reporting the nature of their trauma experiences at the time of clinic intake. For those men who endorsed some previous history of trauma, PTSD Total scores ranged from 1 to 48 with a $M(SD) = 8.09(11.5)$. Comparison of men who were fathers and non-fathers revealed a significant difference in age with non-fathers significantly younger than fathers, $M(SD) = 31.08(11.21)$ versus $M(SD) = 35.75(9.46)$, $F(1,124) = 6.28$, $p = 0.014$. None of the men without children were married, while 24% of the fathers were married. Fathers were also more likely to be living with their partners (45.2%) than non-fathers and (14.7%), $\chi^2(1, N = 124) = 9.42$, $p = .002$. There were no significant differences in ethnicity, whether men were employed, the number of previous traumas they had been exposed to, severity of PTSD symptoms, or whether they were referred for domestic violence. Bivariate correlations shown in Table 2 indicate that PTSD symptoms, drug abuse severity and alcohol abuse severity were all moderately and significantly correlated for the entire sample. Additionally, among the men who were fathers, the variables of PTSD symptoms and drug abuse severity were significantly correlated with hostile parenting (see Table 2).

3.2 Fatherhood and Substance Abuse Differences

Multivariate analysis of variance results indicate no significant differences between fathers and non-fathers on severity of alcohol and drug abuse ($V = .007$, $p = .712$). Fatherhood status was not associated with a linear combination of drug and alcohol abuse severity. The MANOVA analysis examining fatherhood, PTSD symptoms and the interaction of PTSD symptoms and fatherhood with severity of drug and alcohol abuse revealed no main effect for fatherhood, but significant association of PTSD symptoms and an interaction effect of fatherhood status with PTSD symptoms with a linear combination of drug and alcohol severity. The correlation between PTSD symptom severity and drug and alcohol abuse severity was exacerbated for men who were fathers when they were compared to men who were not fathers (see Table 3). Step-down analyses revealed PTSD symptoms were significantly associated with drug abuse severity, while the interaction of PTSD symptoms and fatherhood status was significantly associated with alcohol abuse severity (see Table 3). Variables in the model accounted for 30% of the variance in alcohol abuse severity and 47% of the variance in drug abuse severity.

Although there were no main effects for fatherhood in the self reported severity of drug abuse, binary logistic regression revealed there were significant differences between fathers and non-fathers in whether they had a positive urine toxicology result at the time of assessment. The overall model was significant accounting for 13.5% of the variance in positive drug screening results (Nagelkerke $R^2 = .135$). Fathers were 72% less likely to have

a positive urinalysis. Neither PTSD symptoms nor the interaction of fatherhood and PTSD symptoms impacted the odds of a positive drug screen (see Table 4).

3.3 Parenting of Fathers

Fathers ($n = 78$) reported having from 1 to 5 children with an average of 2.3 ($SD = 1.26$). Forty percent reported having children with multiple women and 34% reported living with at least one of their children. Twenty-seven percent reported having some concerns related to their child or children and 21% percent reported specific concerns about fatherhood or their relationship with their children. Eighteen percent indicated they felt they would benefit from a parenting class to learn to manage their children and 16% reported they would like to discuss fatherhood or child-related issues as part of their treatment. Linear regression models revealed PTSD symptoms and age of fathers were significantly associated with hostile/aggressive and neglectful parenting (see Table 5). Neither drug nor alcohol abuse severity were correlates of negative parenting in either statistical model.

Given the findings that PTSD symptoms were associated with more negative parenting, exploratory analyses were conducted to examine whether fathers who reported they wanted help with parenting or fatherhood issues as part of their treatment had higher levels of PTSD symptoms. Analysis of variance was used to compare fathers who said they would like a parenting class to those who did not and fathers who said they wanted to discuss fathering issues as part of their treatment to those who did not on severity of PTSD symptoms. When compared with the men who were not interested, fathers who were interested in a parenting class ($n = 12$) reported significantly higher PTSD symptoms, $M(SD) = 4.08(4.71)$ versus $M(SD) = 1.23(2.91)$, $F(1, 58) = 6.36$, $p = .02$. There were no differences in PTSD symptoms based on whether fathers wanted to discuss fathering issues as part of their treatment.

4. Discussion

Being a father was significantly associated with decreased likelihood for a positive urine drug screening at the time of initial evaluation but was not significantly associated with severity of self-reported alcohol or drug abuse symptoms. Fathers who had greater PTSD symptoms reported more alcohol abuse severity than non-fathers. This suggests that symptoms of trauma and alcohol use are particularly important to assess in men presenting for substance abuse evaluation who are fathers. Fathers did not report differences in PTSD symptoms when compared to non-fathers, yet fatherhood interacted with PTSD symptoms and was associated with increased severity of alcohol use. This would suggest, that trauma informed, integrative treatment approaches that combine trauma-focused work with substance abuse treatment may be particularly useful for fathers.

Several trauma specific treatments for men dealing with substance abuse disorders have been developed. The Trauma Recovery and Empowerment Model (TREM) (Fallot & Harris, 2002), a group intervention originally designed for women, has been modified for men. Several other treatment models designed to target the specific trauma responses of men and the association to substance abuse have been published recently (Covington, Griffin, & Dauer, 2011; Griffin, 2009) and are showing promise in clinical practice, but have not yet been tested to our knowledge in clinical trials (Covington et al., 2011; Najavits, Schmitz, Gotthardt, & Weiss, 2005; Najavits et al., 1998). Our findings suggest further focus on fathering or tailoring these group treatments specifically for fathers may have added clinical benefit.

PTSD symptoms were associated with hostile-aggressive and neglectful parenting, while severity of alcohol and drug abuse was not. Histories of trauma and PTSD have significant implications for intimate partner relationships and parenting (Ruscio et al., 2002; Samper et

al., 2004). Fathers with higher PTSD symptoms were more likely to state they would be interested in a parenting class as part of their substance abuse treatment. Previous studies have reported lower parenting satisfaction and poorer father-child relationships for men with PTSD symptoms (Ruscio et al., 2002; Samper et al., 2004). This may contribute to increased use of alcohol or drugs to avoid and cope with negative feelings and parenting stress. These studies together suggest a vicious cycle that exists for fathers with substance abuse and PTSD. They may report wanting help with their parenting due to lower parenting satisfaction, but the negative affect associated with PTSD may exacerbate parenting stress resulting in more substance use, which would in turn, reduces parenting ability. Thus, attempting to provide parenting help through a psychoeducational parenting program, is likely to be ineffective without addressing the symptoms of PTSD.

Importantly, some fathers entering treatment had specific concerns about fathering, and would be interested in parenting intervention as an aspect of their treatment. This is consistent with findings reported for men in methadone maintenance treatment where a high percentage of drug-abusing fathers reported concern about their status as fathers and interest in parent intervention (McMahon et al., 2007). Inquiry about fathering and ways substance abuse treatment programs might address the specific needs of fathers deserves further study. A secondary analysis of a randomized pilot study of a cognitive behavioral intervention for men with co-occurring substance abuse and intimate partner violence (SADV; Easton et al., 2007) revealed that SADV significantly reduced substance use and aggression for non-fathers when compared to Twelve Step Facilitation (TSF), but treatment effects on alcohol abuse for SADV and TSF were comparable for fathers and non-fathers. Neither group made significant change during treatment. Targeting father-specific issues as part of treatment may improve outcomes for substance-abusing men who are fathers. Several promising treatments are currently in development that include a focus on fathering for men in substance abuse treatment (McMahon, 2009; Stover, 2009; Stover, 2011), but have not yet been rigorously evaluated.

Fathers were more likely to be married and living with a significant other. Some studies have found the addition of couples and parenting specific components to individual substance abuse treatment improve outcomes (Kelley & Fals-Stewart, 2002, 2008; Lam, Fals-Stewart, & Kelley, 2008). Careful assessment of men's intimate partner relationships, parenting status, parenting behaviors, trauma histories, and PTSD symptoms, along with substance abuse severity, will provide a more comprehensive picture of the needs of men presenting for a substance abuse evaluation and allow for more integrated approaches to intervention for men who are fathers who have posttraumatic symptoms.

This study was meant to provide a preliminary examination of the posttraumatic and substance abuse symptoms of fathers attending an evaluation for substance abuse within a forensic drug diversion clinic to offer directions for further research focused on the needs of fathers with substance abuse disorders. It has several notable limitations. The clients were specifically referred for assessment at one treatment facility due to court involvement. Whether these results translate to the broader population of men applying for substance abuse treatment in a variety of settings is unclear. The range of PTSD symptoms reported in the sample was low. Many of the men did not report the nature or number of previous traumas they had experienced. This is consistent with other studies that have found men are hesitant to report trauma histories (Widom & Morris, 1997; Widom & Shepard, 1996). Although men were more willing to report on their experiences of trauma related symptoms, it is also possible that men underreported their symptoms as well. These data cannot be generalized to a population of fathers with co-morbid PTSD and substance abuse or dependence because very few men reported levels of PTSD symptoms that would meet criteria for a diagnosis of PTSD, nor did this study specifically collect PTSD diagnostic data

is in terms of exposure to a DSM-IV criterion A1 and A2 traumatic event. Further exploration and replication of these findings in a sample of men with higher levels of PTSD symptoms and a diagnosis of PTSD are needed. Although urine screens were used to confirm drug use, other measures were self-report. Collection of information on alcohol use and parenting from collateral informants would have strengthened the validity of the results.

Despite these limitations, this study provides preliminary evidence for the need for careful assessment of both trauma related symptoms and parenting behaviors in fathers entering substance abuse treatment. Additional research on the parenting of men in need of substance abuse intervention is warranted to support the development of targeted interventions that improve outcomes for fathers, mothers, and their children (McMahon et al., 2008).

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Table 1

Descriptive Statistics for the Full Sample and by Fatherhood Status

	Full Sample All Men Applying for Assessment (N = 126)		Fathers Only (n = 78)		Non-Fathers (n = 48)	
	M	SD	M	SD	M	SD
Age *	33.97	10.37	35.75	9.46	31.08	11.21
Years of Education	12.34	2.01	12.26	2.05	12.51	1.93
DAST Total	4.23	4.00	4.14	4.04	4.40	3.98
MAST Alcohol Total	3.69	3.66	3.69	3.78	3.67	3.48
PTSD symptoms	2.07	3.60	2.02	3.60	2.18	3.65
Undifferentiated Rejection	NA	NA	.62	1.29	NA	NA
Hostile/Aggression	NA	NA	1.07	1.76	NA	NA
Warmth/Affection	NA	NA	21.26	3.54	NA	NA
Neglect/Indifference	NA	NA	2.24	2.61	NA	NA

Note: MAST=Michigan Alcohol Screening Test; DAST=Drug Abuse Screening Test; NA=Not Applicable

* Significant difference between fathers and non-fathers, $p < .05$

Table 2

Bivariate Correlations of Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age												
2. Living with Partner	.279**											
3. Employed	.126	.065										
4. Living with Children	-.045	.320**	.022									
5. Referred for DV	.333**	.128	.218*	.038								
6. PTSD Symptoms	-.087	.081	-.072	.070	-.103							
7. MAST Alcohol Total	.247**	.042	.029	.042	.097	.304**						
8. DAST Total	.053	.055	-.115	-.061	-.183	.567**	.613**					
9. Warmth/Affection ^d	.093	-.129	-.281*	-.090	-.140	.075	-.122	.110				
10. Hostility/Aggression ^d	.067	.074	.027	.011	-.019	.337**	.108	.259*	.050			
11. Indifference/Neglect ^d	.279*	.033	-.119	-.001	-.080	.185	.116	.170	.240*	.465**		
12. Undifferentiated Rejection ^d	.065	-.120	.088	-.143	.014	.164	.140	.105	-.113	.312**	.330**	

Note: DV= Domestic Violence;

^dCorrelations based on sample of fathers only (*n* = 78).* $P < .05$ ** $P < .01$ *** $P < .001$

Table 3

Differences in Alcohol and Drug Use severity based on fatherhood status and PTSD symptoms

Variable	Dependent Variable	Pillai's Trace	Multivariate F ^a	Univariate F ^b
PTSD Symptoms	Alcohol Abuse	.32	17.96 ***	2.38
	Drug Abuse	.32	17.96 ***	33.91 ***
Father	Alcohol Abuse	.04	1.60	1.25
	Drug Abuse	.04	1.60	2.94
Father x PTSD	Alcohol Abuse	.08	3.24 *	5.91 *
	Drug Abuse	.08	3.24 *	3.19

^aRepresents multivariate analysis of covariance with both alcohol abuse severity and drug abuse severity in the models as the dependent measure;

^bRepresent post hoc ANCOVA analyses with each dependent variable entered as a covariate (e.g. in alcohol models, drug abuse is entered as a covariate).

* $P < .05$

** $P < .01$

*** $P < .001$

Table 4

Binary Logistic Regression Model for Positive Urinalysis Results

Effect	B(SE)	Odds Ratio
Father	-1.26(.58) *	.282
PTSD Symptoms	.11(.16)	1.12
Father x PTSD	-.01(.18)	.99
Constant	.57(.49)	1.77

*
 $p < .05$

Table 5Linear Regression Models Predicting Negative Parenting ($n = 78$)

	Hostility/ Aggression	Warmth/ Aggression	Indifference/ Neglect	Undifferentiated Rejection
Father's Age	.059(.027) *	.067(.062)	.119(.037) **	.012(.023)
Live with Children	-.404(.537)	-.518(1.25)	-.598(.746)	-.668(.468)
Years of Education	-.275(.109) *	-.045(.254)	-.467(.679) **	-.198(.095) *
Employed	.445(.489)	-2.40(1.14) *	-.452(.679)	.342(.426)
MAST Total	-.044(.083)	-.289(.192)	-.016(.115)	.077(.072)
DAST Total	-.005(.078)	.139(.181)	-.015(.108)	-.047(.068)
PTSD	.226(.085) **	.067(.199)	.259(.119) *	.073(.074)
Intercept	2.12(1.58)	21.54(3.68) **	4.17(2.20)	2.67(1.38)

Note: MAST = Michigan Alcohol Screening Test; DAST= Drug Abuse Screening Test

*
p < 0.05**
p < 0.01