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Examination of the relationship between social support and treatment outcomes in mothers referred by Child Protective Services utilizing the Significant Other Support Scale

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Abstract

Supportive social networks may play an important role in recovery for mothers within the umbrella of Child Protective Services (CPS). However, investigators have yet to assess how the quality of significant other support assists family-based treatment. In this study the influence of significant others was examined in the family-based treatment of 38 mothers who were referred for behavioral treatment by CPS. The Significant Other Support Scale (SOSS) was empirically developed, and subsequently utilized to assess the extent to which participants' significant others were perceived by treatment providers to support the participants' goals during treatment sessions. Results indicated that SOSS scores (but not participant and significant other session attendance) were associated with lower participant child abuse potential and drug use frequency at the conclusion of treatment. There was no relationship found between SOSS scores and participant session attendance. However, there was a positive correlation between SOSS scores and significant other session attendance ($r = .489, p < .01$). The results of this study suggest the quality of significant other support during treatment sessions in this population of mothers may be more important to improving treatment outcomes than session attendance per se. Future directions are discussed in light of the results.

Keywords

Child maltreatment; ethnic minority populations; neglect; social support; treatment

Child neglect (i.e., physical, emotional, educational, medical) is the most prevalent (U.S. Department of Health and Human Services, 2012, 2013) type of child maltreatment. This is important, as 71% of child fatalities in 2011 involved child neglect, either exclusively or in combination with other types of child maltreatment (U.S. Department of Health and Human Services, 2012), and neglected children are less likely to be reunified with their families than abused children (Barber & Delfabbro, 2009). There is also evidence that child neglect has more severe adverse effects on developmental outcomes than physical abuse (Hildyard &

Wolfe, 2002; Trickett & McBride-Chang, 1995), including, for example, insecure attachments, withdrawal, flat affect, poor resiliency, negative self-representations, ineffective regulation of emotion, internalizing and externalizing problems (Egeland, Sroufe, & Erickson 1983; Hoffman-Plotkin & Twentymen, 1984; Howes & Eldredge, 1985; Trickett & McBride-Chang, 1995; Wismer Fries, Shirtcliff, & Pollak, 2008; Wodarski, Kurtz, Gaudin, & Howing, 1990), criminal activity (Rivera & Widom, 1990; Trickett & McBride-Chang, 1995; Van Dorn, Volavka, & Johnson, 2012; Widom, 1989a, 1989b), substance abuse (Hussey, Chang, & Kotch, 2006), economic problems (Currie & Widom, 2010), greater likelihood of using social services (Yanos, Czaja, & Widom, 2010), risky sexual behavior (Wilson & Widom, 2010), increased risk for posttraumatic stress disorder (Widom, 1999), delays in structural brain development (Tupler & De Bellis, 2006), long-term regulatory problems of the stress response system (Wismer Fries, Shirtcliff, & Pollak, 2008), and deficits in height (Pears & Fisher, 2005).

In the United States, physical and sexual abuse of children have shown dramatic declines from 1992 to 2014 (55% and 64%, respectively). Conversely, there was only an 8% drop in child neglect cases during the same time period (Finkelhor, Saito, & Jones 2016). There is no clear reason why child neglect trends have differed so drastically from physical and sexual abuse (Jones, Finkelhor, & Halter, 2006). However, some researchers have speculated that there is a lack of policy attention and public awareness for child neglect in comparison to physical and sexual abuse (Finkelhor et al., 2016; Jones et al., 2006), perhaps leading individuals and groups to exert greater informal social control in the protection of children from physical abuse as compared with child neglect (see review by Emory et al., 2015). Wolock and Horowitz (1984) demonstrated a dearth of attention to child neglect in policy and professional journals, and a decade later, Dubowitz (1994) argued that there had been little change (citing less than 2% of federally funded research in child maltreatment was focused on child neglect). Regardless of the reason for the relatively slow decline in child neglect rates, this form of child maltreatment persists at an alarming rate, and greater research is needed to address this issue. Indeed, a recent meta-analysis revealed that child neglect continues to be an overlooked type of maltreatment in scientific research (Stoltenborgh et al., 2013).

Substance Abuse and Child Maltreatment

Substance abuse has been found to occur in the majority of parents who have been indicated to neglect their children (U. S. Department of Health and Human Services, 2012; Young, Gardner, & Dennis, 1998), and parents who abuse substances are less likely than non-substance abusing parents to complete treatment programs (Choi & Ryan, 2006). Due to their perceived role as primary caregivers (Gaunt, 2013), mothers are more likely to be indicated in the perpetration of child neglect than other caregivers (Sedlak et al., 2010), and mothers who abuse substances are more likely to be reported for child maltreatment than fathers who abuse substances (Locke & Newcomb, 2004). Women are also less likely to seek substance abuse treatment and appear to have different risk factors for drug and alcohol abuse (Sun, 2009). For instance, women who abuse substances are more likely to have dysfunctional family histories and family substance abuse disorders than males (Sanders, 2012). Substance use and abuse in women is more likely to be influenced by a male sexual

partner than vice versa (Sun, 2009). Riehm, Hser, and Zeller (2000) found that intimate partner variables are strong predictors of motivation to complete substance abuse treatment for women but not men, and having a partner who used drugs decreased treatment readiness for women. There is also evidence that women are more likely than men to use substances to manage negative emotions due to interpersonal conflict (Annis & Graham, 1995).

Influence of Social Networks on Substance Abuse

Social networks play an important role in the maintenance and treatment of substance abuse in women (Beckman, 1994; Beckman & Amaro, 1986). Indeed, social support generally appears to be associated with greater treatment compliance and better outcomes in women (Tracy, Munson, Peterson, & Floersch, 2010), and family-based interventions have been implicated as highly effective approaches for substance abuse (Lam, O'Farrell, & Birchler, 2012). However, it is important to mention that most caregivers in the child welfare system are referred to substance abuse rehabilitation programs that do not offer family treatment options (Hannett, 2007), and qualitative research has demonstrated that some social support agents (e.g., substance abusing friends and intimate partners) may actually impede treatment (Rockhill, Green, & Newton-Curtis, 2008). Indeed, households of women who abuse illicit drugs are often unstable, including transient male father figures (Chance & Scannapieco, 2002) as well as conflict and alienation from others (Connell-Carrick, 2003), forcing mothers to raise their children without the support of family members or friends (Donohue, Romero, & Hill, 2006).

Although mothers with substance abuse problems have been found to report relatively low levels of social support (Harmer, Sanderson, & Mertin, 1999), there is evidence that abstinence-oriented social support systems may improve substance abuse treatment outcomes in women (Tracy et al., 2010). For instance, mothers identified to abuse substances have been found to be more likely to regain custody when they had a partner who supported sobriety (Grant et al., 2011).

Past research on social support in substance abuse treatment has relied on qualitative methods in which participants are asked open-ended questions about their support networks (e.g., Rockhill et al., 2008; Sun, 2000; Tracy et al., 2010). Questions often include the number of people in the support system and whether their interactions are positive or negative (e.g., Falkin & Strauss, 2003). These methods do not assess how significant others are explicitly involved in the treatment and recovery process, and make it difficult to determine how significant others can be optimally involved in treatment programming. Furthermore, these studies have relied exclusively on the report of the participant, potentially introducing same source bias.

The current literature suggests social support may play an important role in the treatment of women who abuse substances. However, general social support, rather than support specific to intervention planning and implementation, has been investigated in previous studies. The relationship between social support and treatment outcomes is unclear, perhaps because investigators have focused on overly broad conceptualizations of social support. Therefore, there is a great need to evaluate the extent and method to which social support systems

influence treatment outcomes in women who abuse substance within the child welfare system. In this vein, the present study was conducted to examine the relationship between social support in treatment sessions and treatment outcomes in a sample of ethnically diverse women receiving evidence-supported, family-based behavioral treatment for concurrent abuse of illicit drugs and neglect of their children. It was hypothesized that higher levels of social support during treatment sessions of mothers would be associated with better outcomes in reducing child abuse potential and drug use. It was also hypothesized that treatment session attendance of the participants' significant others would also be associated with greater support during treatment.

Method

Participants

Participants were 38 mothers from a larger study examining the effectiveness of a family treatment (i.e., Family Behavior Therapy, FBT; Donohue et al., 2014). Eligibility criteria included: (a) being at least 18 years old, (b) evidencing illicit substance use during the 4 months prior to the pre-treatment assessment, (c) the participant was referred for treatment of child neglect and drug abuse, (d) the child victim of neglect was living with the participant at the time of referral or the CPS case plan included a recommendation to eventually return the child victim to caregiver's custody (e) at least one adult in participant's social network was willing to participate in the participant's treatment sessions (to enhance external validity participants were not restricted by the nature of these relationships, such as needing to be a spouse or intimate partner).

All participants were formally reported to Child Protective Services (CPS) for child neglect, and based on the respective caseworker's assessment of need were referred to the study to receive behavioral treatment for child neglect and substance use disorder. Types of child maltreatment other than child neglect may have been present upon referral, but were not the primary concern indicated by CPS and were not formally assessed in this study. As can be seen in Table 1, the participants were referred for various forms of child neglect, and about half of the children lived with their caregivers and received welfare benefits at the time of referral.

Procedure

Recruitment and randomization.—The study was approved by the appropriate institutional review board for the protection of human participants. CPS offices were informed of the study and its inclusionary criteria through email and on-site presentations. Upon referral from CPS, an intake specialist separately contacted the caseworker and participant by telephone to determine if inclusionary criteria were met. Qualifying participants were scheduled to be informed of the study and determine if they would like to provide their study consent.

The pre-treatment assessment was utilized to substantiate inclusionary criteria and gather baseline data. Upon completion of the pre-treatment assessment, and confirmation of study inclusionary criteria, participants were randomly assigned to Family Behavior Therapy or

treatment as usual services via urn randomization of consecutive eligible CPS referrals (see Stout et al., 1994; Waldron et al., 2001). Only participants assigned to Family Behavior Therapy were included in data analyses for this study because significant others of these mothers (broadly defined as any adult person in a participant's social network willing to support the participant's treatment goals) were actively recruited in this condition; permitting assessment of their influence. Information about the involvement of significant others in the treatment as usual condition was not assessed. Participants receiving Family Behavior Therapy were assigned a primary and a secondary treatment provider. Two providers implemented intervention to enhance safety while traveling to dangerous neighborhoods, and to better assist child management when families were relatively large.

Data collection.—The current data were collected as part of a larger randomized controlled trial of family behavior therapy for treatment of child neglect in mothers who abused substances (Donohue et al., 2014). Pre- and post-treatment assessments were conducted in the participants' homes by trained assessors who were not informed of the participants' treatment condition. Participants were compensated for their time with gift cards for use at a local department store; \$50 for the pre-treatment assessment and \$100 for the post-treatment assessment. Information relevant to the support of significant others was collected by contacting both primary and secondary providers *after* the participants had completed treatment. Therapists were not aware that they would be contacted regarding this information during the course of treatment. Data from the treatment provider who completed the most sessions for a particular participant were used in the current study analyses. Data from secondary treatment providers was obtained to assist reliability analyses.

Intervention.—Family Behavior Therapy for child welfare (FBT-CW; Donohue et al., 2014) includes 20 sessions that are scheduled to occur within 6 months. Treatment sessions are scheduled to last between 60 and 90 minutes. FBT is based on the Community Reinforcement Approach to alcohol abuse (Azrin, Sisson, Meyers, & Godley, 1982; Hunt & Azrin, 1973). FBT includes (a) treatment planning, (b) dynamic goals and rewards, (c) stimulus control to encourage spending less time with individuals and situations that have involved substance use and other problem behaviors and more time with positive influences, (d) self-control to decrease urges to use drugs and engage in other impulsive behaviors, (e) communication skills training to increase assertiveness and establish positive social relationships with others, (f) financial management, (g) job-getting training, (h) child management skills training, and (i) emergency prevention and management (Urgelles, Donohue, Wilks, Van Hasselt, & Azrin, 2012) to prescriptively manage emergent conditions that often interfere with treatment implementation. Significant others from the participants' social ecology are incorporated to assist implementation of behavioral intervention components (e.g., modeling skills, driving participants to therapeutic activities, encouraging participation in pro-social activities that do not involve drug use, assisting completion of therapeutic assignments). This treatment model allows participants to experience natural consequences for undesired behaviors as well as positive reinforcement for behaviors that are consistent with treatment planning. Family Behavior Therapy has demonstrated success in controlled trials involving adults and adolescents (Azrin et al., 1996; Azrin et al., 2001;

Azrin, Donohue, Besalel, Kogan, & Acierno, 1994; Azrin et al., 1994; Donohue et al., 1999; Donohue et al., 2014).

Measures

The Child Abuse Potential Inventory.—The Child Abuse Potential Inventory (CAPI; Milner, 1986) is a self-report screening instrument used to assess the potential of parents to neglect and physically abuse their children. The Abuse Scale was used in the current study to provide an overall measure of child abuse potential. Scores on the Abuse Scale range from 0 to 486, with higher scores indicative of greater child abuse potential. The Abuse Scale correlates with the Mother-Child Neglect Scale (Lounds, Borkowski & Whitman, 2004) and has been shown to be a good predictor of future child neglect (Ayoub & Milner, 1985). This would be expected as child abuse and neglect frequently co-occur, and they are known to share similar environmental and behavioral antecedents (Garbarino & Collins, 1999). The measure has extensive psychometric support (see Walker & Davies, 2010). However, it should be emphasized that this scale was not used as a proxy for child neglect. Rather, we were interested in determining the extent to which the participants were at-risk for child maltreatment in general.

Timeline Follow-Back.—The Timeline Follow-back (TLFB; Sobell, Sobell, Klajner, Pavan, & Basian, 1986) is a calendar-based assessment in which memory cues (e.g., birthdays, holidays) were utilized to assist participants in recalling the number of days they used substances during the past four months. TLFB data was corroborated by an 8-panel urinalysis toxicology screen (marijuana, cocaine, amphetamines, barbiturates, opiates, benzodiazepines, methadone, phencyclidine) using conventional detection cut-offs. The TLFB has been well validated for assessing alcohol and drug use (e.g., Carey, 1997; Donohue et al., 2004; Donohue, Hill, Azrin, Cross, & Strada, 2007; Fals-Stewart, O'Farrell, Freitas, McFarlin, & Rutigliano, 2000).

Treatment session attendance.—The total number of Family Behavior Therapy sessions attended by each participant during the 6 months following baseline assessment was obtained.

Significant Other Support Scale.—The Significant Other Support Scale (SOSS) was developed in this study to assess involvement of persons who were present during treatment sessions at the participants' request to support the participants in their treatment sessions. The SOSS was completed by participants' treatment providers, and developed in a manner consistent with the measurement development guidelines proposed by Holmbeck and Devine (2009). A review of the literature and clinical experience was used to determine themes that were relevant to significant other support in FBT (Donohue et al., 2009) and substance abuse treatment in general (Love, Longabaugh, Clifford, Beattie, & Peaslee, 1993). Project staff used these themes to devise relevant items through a process of group exploration and consensus. From this item pool, only aspects of significant other support in treatment that could be observed by providers were included as potential test items. The measure was then reviewed by an expert in the substance abuse treatment field. This process resulted in a measure comprised of five specific items to assess aspects of support in

treatment, and one overall support item. The items assessed the extent to which the provider believed the significant other encouraged the participant to attend treatment sessions, complete homework assignments, abstain from drugs and alcohol, engage in positive parenting behaviors, and develop skills during therapy session role-plays. A sixth item assessing overall significant other support was developed to assist in testing validity of the SOSS. A 7-point Likert scale response set was utilized (1-extremely unsupportive, 2-very unsupportive, 3-somewhat unsupportive, 4-neutral, 5-somewhat supportive, 6-very supportive, 7-extremely supportive).

Plan of Analysis

Preliminary analyses.—Exploratory factor analysis (EFA) was conducted on the five SOSS items to examine its internal structure. Although a sample size of 38 is often considered too small for EFA, in de Winter, Dodou and Wieringa's (2009) simulation and subsampling study, involving a psychological dataset of individuals who completed the Big Five Inventory, they determined that EFA can yield reliable results even when the number of participants is well below 50 provided the data are well-conditioned (i.e., high factor loadings, above .80; low number of factors, high number of variables).

Internal consistency of the measure was examined using Cronbach's alpha, and an intra-class correlation coefficient (ICC) was calculated to assess the inter-rater reliability of the scale between the primary and secondary providers. A bivariate correlation was calculated to examine the relationship between the five SOSS items and the overall support item. Bivariate correlations and MANOVA's were used to determine if any demographic variables (age, ethnicity, marital status, employment status, highest grade level completed) assessed were related to the dependent variables (child abuse potential, drug use, session attendance). It was determined a priori that demographic variables found to be significantly associated with the dependent variable would be statistically accounted for in the primary analyses. Dependent variables were also examined for inter-relatedness using bivariate correlations to determine the appropriate regression model for the primary analyses.

Primary analyses.—Regression analyses were used to test the hypothesis that greater significant other support (as per SOSS scores) is associated with less child abuse potential, less drug use, and more treatment attendance. Baseline scores for child abuse potential and drug use were entered into the regression model as covariates.

Results

Descriptive Statistics

Providers were generally "neutral" in their assessments of significant other support, with the items ranging from 3.89 to 4.37 on a 7-point scale of support. Descriptive statistics of the primary variables and bivariate correlations among the primary variables are listed in Table 2. On average, mothers attended 16.95 treatment sessions ($SD = 4.80$) and their significant others attended 11.42 of those treatment sessions ($SD = 6.31$).

Post-treatment assessments were completed by 31 out of the 38 participants in this study (81.6%). Demographic variables (age, ethnicity, marital status, employment status, highest

grade level completed) and SOSS scores of treatment completers ($M = 20.5$) were not statistically different from non-completers ($M = 17.3$).

Preliminary Analyses

An exploratory factor analysis with maximum likelihood extraction was performed on SOSS scores as a potential item reduction method, and to preliminarily assess the internal validity of these items. This method of factor analysis is the preferred extraction method for normally distributed data (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The Kaiser-Meyer-Olkin (KMO) sampling adequacy index suggested that factor analysis of the items was appropriate, $KMO = 0.825$ (Kaiser, 1974), and Bartlett's test of sphericity was significant ($\chi^2(10) = 162.959, p < .001$). A single factor emerged with an eigenvalue of 4.08 which explained 81.68% of the total variance. An examination of the scree plot and the pattern of factor loadings were consistent with a one-factor solution. The communalities were all above 0.80, suggesting that each item shared common variance with other items. The factor loadings ranged from 0.81 to 0.94 (see Table 3). Internal consistency was determined to be good (Cronbach's $\alpha = 0.75$). These findings suggested the factor analysis was appropriate despite the small sample size (de Winter, Dodou & Wieringa, 2009; MacCallum, Widaman, Zhang, & Hong, 1999).

Given that all SOSS items loaded on the same factor, the scores for each item were summed for each participant to create one unified score of overall significant other support. Twenty-five of the participants had SOSS scores from a second provider. These scores were used to test this scale's preliminary inter-rater reliability. Inter-rater reliability was good ($ICC = 0.75$). As expected, the SOSS total score was significantly correlated with the item testing overall significant other support ($r = 0.96, p = .000$). These results, albeit preliminary given a relatively small sample size, suggest the SOSS appears to be consistent with a measure of overall significant other support in treatment.

Relationship Between Child Abuse Potential and Drug Use Frequency

Interrelatedness between the dependent variables was examined by conducting bivariate correlations. The participants' post-treatment CAPI Abuse scores were correlated with their number of days of drug use during treatment ($r = .39, p < 0.05$), indicating greater child abuse potential at post-treatment assessment was associated with more days of drugs use during treatment. This relationship has been previously demonstrated in the literature (e.g., Young et al., 1998).

Primary Analyses

Since a significant relationship was found between child abuse potential at post-treatment assessment and drug use frequency throughout treatment, a multivariate multiple regression analysis was conducted utilizing these measures as dependent variables and the total score on the SOSS as the independent variable. As expected, the multivariate multiple regression analysis revealed a significant effect for significant other support/SOSS (Wilks' $\lambda = 0.72, F = 4.96, p < 0.05$), even when controlling for pre-treatment CAPI Abuse scores and drug use. The SOSS scores predicted both the participants' post-treatment CAPI Abuse Scale scores

($MS = 25002.85$, $F = 7.21$, $p < 0.05$) and drug use during treatment ($MS = 562.78$, $F = 4.63$, $p < 0.05$).

Simple bivariate correlation analyses indicated that session attendance for the participants and the participants' significant others were not related to treatment outcomes (i.e., participants' post-treatment CAPI Abuse Scale scores, post-treatment drug use; $ps > .05$). There was no relationship found between participant session attendance and SOSS scores ($p > .05$). However, there was a significant relationship between significant other session attendance and SOSS scores ($r = .489$, $p < .01$), suggesting that as the significant others' support increased they attended more treatment sessions.

Discussion

Social support within the context of child maltreatment has largely been framed as an external process by which the provision of concrete resources and emotional support are thought to be effective in assisting parents to become more effective in their roles. Research has established the effectiveness of social support in increasing parenting skills, decreasing maltreatment, and aiding parents to overcome destructive and maladaptive patterns (e.g., Cohen & Canan, 2006; Frame, Conley, & Berrick, 2006; Linares, Montalto, Li, & Oza, 2006; Lyons, Henly, & Schuerman, 2005). Although there is compelling evidence for the usefulness of social support networks within the target parents' environment, little is known about the appropriateness of significant others in a therapeutic session, especially in ethnically diverse populations.

The present study examined the relationship between significant other support in therapy sessions and treatment outcomes in a sample of mothers who were referred for treatment of comorbid substance abuse and child neglect. In doing so, a 5-item measure was preliminarily developed to assess the extent to which significant others supported the participants during treatment (i.e., encouraging therapy attendance, homework completion, abstinence from drugs and alcohol, and positive parenting behaviors, and participation in role-plays during sessions). An exploratory factor analysis revealed a single factor solution appearing to measure overall significant other support in treatment. The resulting SOSS demonstrated psychometric properties that suggest this scale is promising for future research, including good internal consistency, inter-rater reliability. This measure was also found to correlate with an item assessing overall significant other support in treatment, and significant other attendance, supporting its validity.

Results indicated that greater overall significant other support during treatment sessions was associated with the participants' reductions in drug use and child abuse potential following treatment. Previous research has demonstrated that general social support has been associated with better parenting, but the relationship between social support during treatment sessions and substance abuse treatment outcomes have yet to be reliably assessed. Based on previous research, general social support appears to be related to better substance abuse treatment outcomes, but only when provided by abstinence-oriented friends or family (Tracy et al., 2010). Moreover, substance abusing women appear to have better outcomes when their friends and family are supportive of their decision to enter substance abuse treatment

(Amaro et al., 1987). However, the present study is the first to assess the behavior of significant others during treatment, and its relationship to treatment outcomes. The positive relationship found between support from the participants' significant others during treatment sessions and the participants' treatment outcomes in this study suggest it is important for treatment providers to both assess and encourage the extent to which significant others are supportive during treatment sessions. Importantly, there was no significant relationship found between significant other session attendance and post-treatment outcomes (i.e., drug use frequency, child abuse potential), suggesting outcome improvements were not due to significant others simply attending more sessions, which would also be consistent with previous research.

The SOSS demonstrates that measures of general social support may not fully capture important distinctions in the ways mothers are supported by their significant others during treatment sessions. Mothers were encouraged to choose significant others who they deemed to be supportive of their treatment goals. However, variability in SOSS scores demonstrated that many participants had significant others who were not supportive of their treatment goals, although these persons may have been supportive in other ways. Therefore, it may be important for treatment providers to assist these mothers in understanding how significant others may be optimally involved in their treatment plans.

Despite these encouraging results, the interpretation of findings from this study should be tempered by its limitations. The number of participants in the study was small, and although reliability was generally good, the measures used in this study relied on self- and clinician-report. Therefore, it is possible results were distorted by biased response patterns. We recommend investigators attempt to conduct large scale future studies that are aimed at replicating the current findings using observational rating scales that are completed by trained assessors who are blind to experimental design. The SOSS scores of blind raters could be correlated with SOSS scores of treatment providers to enhance assessment of inter-rater reliability. It is also important to emphasize that social support in therapy was not experimentally manipulated. Therefore, causality cannot be inferred from the current results. Although it makes sense, theoretically, that greater support from a significant other in treatment would result in better outcomes, this study could not rule out alternate explanations. For example, it is possible that motivated participants with better treatment outcomes may have been more likely to foster good relations with their significant others, or that treatment providers may have been biased to rate significant others as being more supportive when participants were perceived to be more successful. Along these lines, treatment providers were not privy to formally collected treatment outcome study data. However, they may have contemporaneously observed various process-related outcomes (e.g., spontaneous reports of substance use frequency, observations of neglectful behavior).

Lastly, it is important to emphasize that the participants were referred to this study by CPS for treatment of child neglect and drug abuse treatment. An attempt was made to substantiate substance use disorder (i.e., semi-structured interview, urinalysis testing, Timeline Follow-back). However, child maltreatment type was not substantiated utilizing formalized classification procedures, and psychometrically validated measures of child neglect were not utilized in this study. Although quantified assessment of child maltreatment was assessed in

this study, it is possible other forms of child maltreatment may have influenced the results. Therefore, investigators should assess the SOSS in clearly defined populations to determine its generalizability to various treatment contexts.

Importantly, several research questions remain unanswered about why the SOSS measure appears to be plausible in illustrating how significant others can be integrated in the therapeutic process. For example, why does having a supportive significant other present during treatment sessions positively affect treatment outcomes? How is it that the significant other is able to encourage the mothers with therapy attendance, assistance with homework completion, abstinence from drugs/alcohol, positive parenting behaviors, and participation in role-plays during sessions? Future research surrounding the SOSS could consider how much the supportive significant others increase *accountability* on the part of mothers. Indeed, other researchers have found that child maltreatment decreases when caregivers are paired with peers who offer support and provide oversight in the care of dependent children (Denby, 2011). Similarly, subsequent iterations of the SOSS tool may be able to better determine if the social support provided to mothers during a treatment session serves as *therapeutic mitigation*, thereby decreasing what can at times be an intimidating and daunting child welfare engagement experience. Additionally, future research that examines the SOSS and measures the effectiveness of embedding significant others within treatment should consider the extent to which the significant others serve a *gatekeeping function*. Prior research has demonstrated that social support networks often serve as a monitoring function, thus ensuring the appropriateness of new or existing members who enter the network (Alford, 2003; Brown, 2008).

Relevant to practice considerations, the SOSS has potential for framing how significant others of mothers in the child welfare system are engaged from the very onset of their contact with child welfare officials. For instance, referrals to such treatments as Family Behavior Therapy are typically initiated during the child and family team (CFT) meetings (Child Welfare Information Gateway, 2012) and other family decision-making processes. The CFT is essential in that this is when significant support systems are brought into the service process and remain as the mother transitions through the recommended case plan. Child welfare professionals could use the SOSS tool as a mechanism to coalesce the team around the support role that the significant other can play throughout the family's engagement in services. Along different lines of thinking, family courts and drug courts could potentially be well served by a definitive SOSS measure, because it provides a mechanism and justification for recommending expanded services (i.e., family sessions), thereby increasing the likelihood of appropriate insurance reimbursement and directed use of public child welfare services funding.

In conclusion, albeit exploratory in nature, this study yields important findings about the importance of assessing the participation of significant others within the treatment process. With additional research of the SOSS measure as demonstrated here, the field stands to gain a broader perspective of effective ways of assessing the quality of significant other support during intervention. The future research direction proposed here can potentially bring us closer to understanding how the quality of social supports proves meaningful in child protective services intervention.

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Table 1

Type of Neglect Experienced by Children According to CPS, Custodial Status of Child Victims' Caregivers , & Welfare Benefits Received at Time of Referral to Treatment (n = 38)

	n	%
<u>Neglect Type</u>		
Used drugs while pregnant	15	39.5
Lack of supervision	5	13.2
Physical Neglect	1	2.6
Drug exposed infant/child	2	5.3
Environmental neglect	2	5.3
Multiple types of neglect	6	15.8
Not available	7	18.4
<u>Custodial Status of Child Victim's Caregiver</u>		
Child in Custody of Caregiver	10	26.3
Child Not in Custody of Caregiver	12	31.6
Not Available	16	42.1
<u>Welfare Benefits</u>		
Receiving Benefits	24	63.2
Not Receiving Benefits	14	36.8

CPS = Child Protective Services; Welfare benefits were financial in nature.

Table 2

Bivariate Correlations, Means and Standard Deviations Among Participants' Pre- and Post-Treatment Outcome Measures, Attendance, and SOSS Total scores (N = 38)

Variable	Pre-CAPI	Post-CAPI	Pre-Drug	Post-Drug	Attendance	SOSS total
Pre-CAPI	1					
Post-CAPI	0.70 ^{**}	1				
Pre-Drug	0.27	0.10	1			
Post-Drug	0.31	0.39 [*]	0.34	1		
Attendance	0.05	0.03	-0.01	0.09	1	
SOSS total	-0.11	-0.42 [*]	0.13	-0.32 [*]	0.12	1
Mean	170.32	124.10	29.42	4.58	16.95	19.87
SD	107.19	89.34	35.11	12.40	4.80	8.81
<i>n</i>	38	31	38	31	38	38

CAPI = Child Abuse Potential Inventory; Drug = Timeline Follow-back drug use during the past 4 months; Attendance = number of days therapy sessions were attended by significant others; SOSS total = Significant Other Support Scale Total Score.

^{**}
 $p < .01$

^{*}
 $p < .05$

Table 3

Factor Loadings and Communalities Based for a Maximum Likelihood Analysis of the SOSS (N = 38)

Item	Factor Loading	Communality
1. encouraging/assisting the client to attend sessions	.93	.86
2. encouraging/assisting the client in homework completion	.91	.81
3. encouraging/assisting the client in staying clean from drugs and alcohol	.90	.70
4. encouraging/assisting client in positive parenting behaviors	.85	.82
5. participation in role-plays and discussions during sessions	.84	.72