

ADULT SURVIVORS OF CHILD SEXUAL ABUSE

The Efficacy of a Condensed *Seeking Safety* Intervention for Women in Residential Chemical Dependence Treatment at 30 Days Posttreatment

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This study examined the efficacy of a condensed version of the Seeking Safety intervention in the reduction of trauma-related symptoms and improved drug abstinence rates among women in residential chemical dependence treatment. One hundred and four women were randomly assigned to treatment including a condensed (six session) Seeking Safety intervention or the standard chemical dependence intervention. The Seeking Safety participants reported lower sexual-abuse-related trauma symptoms at 30 days posttreatment as compared to participants who received only standard treatment. However, the condensed Seeking Safety intervention was not more advantageous in reducing overall trauma symptoms or relapse 30 days after treatment ended.

KEYWORDS *trauma, substance abuse, sexual abuse, treatment*

Traumatic events have been associated with an increase in substance abuse and other psychiatric conditions (Brewin, Andrews, & Valentine, 2000; Clements, Speck, Crane, & Faulkner, 2004; Easton, Swan, & Sinha, 2000) for

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both women and men. Having post-traumatic stress disorder (PTSD) or being a victim of abuse increases the risk of having a substance use disorder and vice versa (Plant, Miller, & Plant, 2004; Stewart & Conrod, 2002; Stewart, Conrod, Pihl, & Dongier, 1999). Moreover, women compared to men are especially prone to sex-related abuse and violence (Coffey, Dansky, Falsetti, Saladin, & Brady, 1998; Tjaden & Thoennes, 2000) and they are more likely than men to be afflicted with PTSD (Sonne, Back, Zuniga, Randall, & Brady, 2003; Zlotnick, Zimmerman, Wolfsdork, & Mattia, 2001). Furthermore, women with chemical dependence in particular may be more prone to develop PTSD than women in the general population (Cottler, Compton, Mager, Spitznagel, & Janca, 1992; Najavits, Weiss, & Shaw, 1997). Whether or not women with chemical dependence are diagnosed, the literature suggests that as many as 60% to 84% of women in drug addiction treatment are victims of childhood sexual abuse (Freeman, Collier, & Parillo, 2002).

The challenges of providing treatment for women who have addiction and trauma disorders are numerous. Their treatment needs are further complicated by various mental health needs that are often associated with repeated childhood physical and sexual abuse, sexual victimization, incest, and violence (Kang, Magura, Laudet, & Whitney, 1999; Najavits, Weiss, & Shaw, 1999; Ouimette, Kimerling, Shaw, & Moos, 2000). In a study of treatment-seeking male and female veterans with substance use disorders, Ouimette and colleagues (2000) found higher rates of sexual victimization and multiple forms of abuse among female veterans as compared to male veterans. Consequentially, the lives of these female veterans were complicated by substance abuse, psychiatric symptoms, and poor psychosocial functioning.

Furthermore, studies show that many women enter treatment with limited financial resources, a history of domestic violence, a greater need for emotional support, and insufficient coping skills, including those specific to their parenting responsibilities (Fiorentine, 2001). The complex clinical picture associated with female survivors of sexual abuse is quite daunting, as it diminishes their capacity for life satisfaction and increases their risk for unhealthy behaviors, depressive symptoms, self-esteem problems, and impaired family relationships (Charney, Palacios-Boix, & Gill, 2007; Fullilove et al., 1993; Najavits, 2002).

Women with co-occurring substance abuse and trauma histories present with a more severe clinical profile that is often associated with poor treatment outcomes (Najavits et al., 1999; Rosen, Ouimette, Sheikh, Gregg, & Moos, 2002). Thus, such conditions require consideration in the development and provision of effective treatments for this population. Complicating matters, many women in treatment for chemical dependence report that as they remain abstinent, they become increasingly aware of their trauma memories and trauma-related emotions (Najavits, 2005). However, standard clinical intake procedures rarely include assessments for both trauma-related disorders and substance abuse disorders (Elhai, North, & Frueh,

2005; Fullilove et al., 1993; Najavits, 2002). Consequently, trauma-related issues are a significant contributor to a client's presenting issues but are often overlooked or ignored during the course of treatment planning. Moreover, the prototypical intervention is not tailored to treat the interrelated, intricate needs of these dually afflicted women; instead, the common treatment modality is unilateral treatment for substance abuse, trauma disorders, or other psychological problems (Najavits, 2002).

The current study explored whether a condensed schedule of integrated treatment that would fit within the timeframe of existing brief 30-day residential treatment programs would be effective for improved drug abstinence rates and trauma-related symptoms. In addition, we specifically investigated the effectiveness of this condensed intervention on symptoms associated with sexual-abuse-related trauma, considering that researchers have implicated sexual abuse as a chief risk factor for women in developing severe trauma disorders (Breslau et al., 1998; Bryer, Nelson, Miller, & Krol, 1987; Ouimette et al., 2000; Zlotnick et al., 2001). To investigate whether an intervention would produce our targeted outcomes in a brief six-session timeframe, we selected *Seeking Safety* (SS; Najavits, Weiss, Shaw, & Muenz, 1998), an intervention that was already empirically supported (e.g., Gatz et al., 2007; Hien, Cohen, Miele, Litt, & Capstick, 2004; Young et al., 2004; Zlotnick, Najavits, Rohsenow, & Johnson, 2003), and condensed it for our study.

SS is a manualized 25-session intervention that is grounded in cognitive behavior therapy that utilizes coping skills to integrate trauma-specific treatment with substance abuse treatment (Najavits, 2002). We selected SS for several reasons. It offered the simultaneous integrated trauma and substance abuse approach to treatment that was appropriate for women in chemical dependence treatment (Najavits, 2002). In addition, SS appeared to be well suited for our setting as it was originally developed for women to be used in a group modality (Najavits, 2004). Additionally, SS has been demonstrated to be effective in treating women who are similar to the women in our study (women in treatment for substance abuse disorders; Gatz et al., 2007; Young et al., 2004) with low income (Hien et al., 2004) and receiving treatment at community-based, publically funded facilities (Gatz et al., 2007). Furthermore, the flexibility of SS seemed promising, as this model has been shown to be adaptable to different situations, schedules, and session times (Najavits, 2004). Additionally, previous research suggested that SS might fit into the proposed six-session intervention. SS was developed with 25 possible topics divided among cognitive, behavioral, and interpersonal areas; however, researchers reported that improvements were shown in clients who attended an average of at least 6 of the scheduled 25 sessions (Najavits, 2002).

Specifically, the current study aimed to test two hypotheses: (a) that six SS sessions occurring two sessions per week in conjunction with standard chemical dependence treatment would reduce sexual abuse-related trauma symptoms to a greater extent than only standard treatment for women in

residential chemical dependence treatment, and (b) that drug abstinence rates would be more improved for women who received the six-session condensed SS intervention compared to those who received standard treatment. In particular, we were interested in whether these predicted benefits of the condensed SS intervention would exist 30 days after the completion of residential treatment. Literature suggests that many women with trauma histories abuse alcohol and drugs as a coping response; thus, the benefits of stopping substance use might not outweigh the feeling of numbness they are trying to achieve (Najavits, 2005). Moreover, immediately after residential drug treatment is completed, women are faced with the challenge of independently maintaining a drug-free lifestyle. Women reported that as early as one week following residential drug treatment, they returned to their drug use in response to cravings, stress, loneliness, depression, and anger (Strauss & Falkin, 2001).

If the addition of a condensed schedule of SS is demonstrated to be effective in this regard, the findings of this study may help residential treatment programs meet the needs of women in two capacities. First, such treatment programs could target the concomitant problems of trauma and substance abuse that commonly occur among women who are chemically dependent, thus producing better outcomes toward reducing their relapse and trauma-related symptoms. Second, by incorporating integrated treatment into brief treatment programs, female clients would need to incur only minimum time away from their children and families and transition back into community in less time.

METHOD

Participants

Participants were 104 women who were enrolled in substance abuse treatment at a community residential facility. The facility's program director indicated that the majority of the clients entering treatment present with histories of intergenerational substance abuse, untreated histories of sexual abuse, severe physical abuse, or concomitant mental health needs. In line with the facility's admission criteria, the participants were without severe medical conditions or active psychosis. The ethnic composition of the sample was mainly Caucasian/White (51%) and African American/Black (47%). These women ranged in age from 21 to 61 years, had an average of 2–3 children, and the great majority (87%) were not currently married. Many of these women were economically and educationally disadvantaged, more than half (60%) reported household incomes of less than \$500 per month, and almost all (98%) reported being unemployed. Many (43.8%) did not have a high school diploma or a GED. See Table 1 for additional demographic information about the sample.

TABLE 1 Participant Demographic Characteristics

Variable	(M, SD, n)	(f/n, %)
Age	(34.7, 8.7, 91)	
Number of children	(2.5, 1.8, 90)	
Single, separated, or divorced		(74/85, 87%)
Education		
No high school diploma nor GED		(39/89, 43.8%)
HS diploma		(17/89, 19.1%)
GED		(9/89, 10.1%)
Some college		(20/89, 22.5%)
4 year college degree or higher		(4/89, 4.5%)
Unemployed		(60/ 61, 98.4%)
Monthly income		
<\$500		(52/87, 59.9%)
\$500–\$999		(22/87, 25.3%)

Procedure

We recruited female clients in their initial phase of residential treatment at a community-based alcohol and drug treatment center using flyers that invited participants to attend the study's information sessions and that indicated that snacks would be provided. The clients that elected to participate by signing a written consent then completed the baseline measures, were assigned an anonymous identification code, and were randomly assigned to either the study's *SS* intervention or the standard alcohol and drug treatment at the facility.

The *SS* intervention comprised six 90-minute group sessions that were scheduled twice a week in conjunction with the facility's regularly scheduled treatment programming. Based on consultations with the developer (Najavits) and the psychology assessment team at the treatment facility, the following six *SS* topics were selected: (a) Introduction to Safety, (b) PTSD: Taking Back Your Power, (c) Detaching from Emotional Pain (Grounding), (d) Setting Boundaries in Relationships, (e) Asking for Help, and (f) Commitment. Material from the *SS* treatment manual (Najavits, 2002) was condensed and placed into a client workbook. Topics were processed according to the *SS* treatment manual and in a continuous schedule that was repeated until the study was completed. In general, clients completed the condensed *SS* intervention within 3–4 weeks, considering that some clients had to make up sessions due to conflicting appointments (e.g., court appearances, medical appointments).

Following the completion of the intervention or the standard treatment equivalent, participants completed the posttreatment administration of the study measures. During the 30 days posttreatment assessment session, participants completed the assessment measures, provided urine samples using the InstaCup Drug Screens, gave self-reports of their drug abstinence or relapse status, and received a \$15.00 cash equivalent, a meal, and small incentives (door prizes) for participating in the study.

Measures

TRAUMA SYMPTOM CHECKLIST-40 (TSC-40)

The TSC-40 (Briere & Runtz, 1989; Elliott & Briere, 1992) is a relatively brief, 40-item self-report instrument consisting of six subscales (Anxiety, Depression, Dissociation, Sexual Abuse Trauma Index, Sexual Problems, and Sleep Disturbance) that measure symptoms associated with childhood or adult traumatic experiences (Elliott & Briere, 1992). Items are rated according to frequency of occurrence over the prior two months, using a 4-point scale ranging from 0 to 3. The TSC-40 has predictive validity with a wide range of traumatic experiences, including sexual and emotional abuse (Binder, McNeil, & Goldstone, 1994; Dutton, 1995; Dutton & Painter, 1993). Consistent with previous studies, the internal consistency for the TSC-40 for the participants in the current study was very good ($\alpha = .93$).

SEXUAL ABUSE TRAUMA INDEX (SATI)

The SATI is a subscale of the TSC-40 (Briere, 1996; Briere & Runtz, 1989) that was used to measure the participant's sexual abuse-related trauma symptoms. This subscale is established as a good predictor of a history of sexual abuse and has accurately predicted 77% of sexual abuse histories among inpatients (Zlotnick et al., 1996). Internal consistency estimates of reliability indicated satisfactory reliability for the SATI subscale of the TSC-40 among the current study's participants ($\alpha = .73$).

MODIFIED PTSD SYMPTOM SCALE (MPSS-SR)

The MPSS-SR (Falsetti, Resnick, Resick, & Kilpatrick, 1993) is a brief 17-item measure to assess overall trauma symptoms. This measurement has been used as a screening tool within substance abusing populations to increase the diagnosis and subsequent treatment of PTSD using the *Diagnostic and Statistical Manual of Mental Disorders* (DSM III-R, American Psychiatric Association, 1987) criteria (Coffey et al., 1998). For the MPSS-SR, the internal consistency was very good for the current sample ($\alpha = .97$), which is consistent with previous studies.

INSTACUP DRUG SCREEN

The InstaCup Drug Screen was administered to determine the drug abstinence status for participants who returned to the facility approximately four weeks posttreatment to complete the study. The InstaCup Drug Screen quickly detects any marijuana, cocaine, PCP, morphine, methamphetamine,

methadone, amphetamine, barbiturates, or benzodiazepines in each participant's urine sample with an overall accuracy rating of 99% (Forefront Diagnostics, 2001).

RESULTS

Descriptive Statistics

Initially, 52 women were randomly assigned to the condensed SS intervention and 52 to the standard treatment. Of the 52 women assigned to the condensed SS intervention, 1 woman requested to discontinue attending the SS sessions, but remained in the facility's standard treatment. Therefore, we excluded her from these analyses. Of the remaining 51 women assigned to SS, there were 28 who completed all 6 SS sessions, 8 who completed 5 of the 6 sessions, and 15 who completed 4 or less sessions. In the analyses, we classified the women who received at least 5 of the 6 available SS sessions as the condensed SS intervention group ($n = 36$).

Effects of Condensed SS Intervention on Sexual Abuse Trauma Related Symptoms

The participants' mean scores and standard deviations for sexual abuse trauma symptoms at the pretreatment and at the 30 days posttreatment assessment period are listed in Table 2. In order to test Hypothesis 1, we utilized a mixed between-within ANOVA to evaluate the effects of the intervention type (condensed SS versus standard treatment) and time (baseline versus 30 days posttreatment) on sexual abuse trauma symptoms. The time main effect was significant, Wilks's lambda = .45, $F(1,37) = 44.87$, $p < .01$, partial eta squared = .54, indicating a large effect size. The intervention type x time interaction effect was also significant, Wilks's lambda = .88, $F(1,37) = 5.09$,

TABLE 2 Participants' Trauma Symptoms by Intervention and Time

Trauma Scales	SS Booster ¹		Standard treatment	
	Baseline (M, SD, n)	30 Days posttreatment (M, SD, n)	Baseline (M, SD, n)	30 Days posttreatment (M, SD, n)
*(TSC-40-SATI)	(8.42, 4.49,36)	(2.32, 3.18, 22)	(7.48, 5.12, 50)	(5.22, 5.03,18)
(TSC-40-Total)	(49.86, 19.49,36)	(18.68, 19.05,22)	(47.96, 24.47, 50)	(20.83, 21.71, 18)
*(MPSS-SR)	(47.86, 30.76, 29)	(17.37, 21.64,19)	(49.36, 30.94,44)	(34.29, 26.63,14)

* $p < .05$.

¹5-6 Sessions Completed.

Note: The TSC-40-SATI refers to Sexual Abuse Trauma, the TSC-40 Total refers to Overall Trauma, and the MPSS-SR refers to Overall Trauma.

$p < .03$, partial eta squared = .12, indicating a moderate effect size. The univariate test associated with the intervention main effect was nonsignificant, $F(1,37) = 1.87$, $p = .18$. Two independent samples t-tests were conducted to follow up the significant interaction. At baseline, the two intervention types were not significantly different from each other on their sexual abuse trauma symptoms, $t(84) = -0.88$, $p = .38$. At 30 days posttreatment, the condensed SS intervention group yielded a significantly lower sexual abuse trauma mean score, $t(38) = 2.22$, $p = .03$. The eta squared statistic (.11) indicated a moderate effect size. These results supported the hypothesis that the condensed SS intervention produced lower sexual abuse trauma symptoms at the 30 days posttreatment assessment as compared to the women who received only standard chemical dependence treatment.

Additional Analysis of Condensed SS Intervention on Overall Trauma Symptoms

Since the analysis of Hypothesis 1 showed support for the effectiveness of the condensed SS intervention for trauma that is specifically related to sexual abuse, we conducted additional analyses to determine if the condensed SS intervention was also effective in reducing overall trauma symptoms at 30 days posttreatment. The participants' mean scores and standard deviations for overall trauma symptoms at the pretreatment and at the 30-days posttreatment assessment period are listed in Table 2. In the initial analysis of Hypothesis 1, at baseline the SS booster group and the standard treatment group were not determined to be significantly different on their overall trauma scales, thus independent t-tests were conducted to compare the two groups on their overall trauma scales at 30 days posttreatment. To minimize Type I error, a Bonferroni adjustment was performed by lowering the alpha level from .05 to .025. Results from the independent samples t-tests indicated that there was not a significant effect for treatment type at 30 days posttreatment on the client's overall trauma symptoms as measured by the TSC-40, $t(39) = 1.73$, $p = .09$. In addition, there was not a significant treatment effect for treatment type on overall trauma as measured by the MPSS-SR trauma scale, $t(31) = 2.01$, $p = .05$. The eta squared statistic (.12) indicated a moderate effect size; however, with the Bonferroni adjustment, the effect remained nonsignificant.

Effects of Condensed SS intervention on Abstinence

In order to test Hypothesis 2, the chi-square test of independence was utilized to compare the ratios of SS booster participants versus standard treatment in terms of drug abstinence (negative urine drug screens). As listed in Table 3, the overall chi-square test of independence was significant,

TABLE 3 Abstinence Status at 30 Days Posttreatment by Intervention

	SS Booster ¹		Standard treatment	
	<i>N</i>	%	<i>N</i>	%
Abstinent	9	25.0	13	25.0
Relapsed	8	22.2	2	3.8
Nonreturner	19	52.8	37	71.2

¹5–6 Sessions Completed.

$\chi^2(2, N = 88) = 7.45, p = .024$, indicating that there was a difference in the rates of drug abstinence (negative urine drug screens), relapse (positive urine drug screens), or nonadherence (did not return to the 30 days posttreatment assessment) between the two intervention groups. Among the participants that had previously participated in the condensed *SS* intervention, 25% obtained abstinent status, 22.2% received relapse status, and 52.8% did not return to the 30 days posttreatment assessment. Among the participants that had previously participated in the standard treatment, 25% received abstinent status, 3.8% obtained relapsed status, and 71.2% did not return to the 30 days posttreatment assessment. These results were in the opposite direction of the hypothesis, indicating that participants in the condensed *SS* intervention group (as compared to the standard treatment group) had higher relapse rates. However, the condensed *SS* intervention group had higher rates of women who adhered with the study requirements by returning to the 30 days posttreatment compared to the standard treatment group.

DISCUSSION

The current study investigated whether a condensed *SS* intervention consisting of 5 to 6 sessions was more effective in lowering sexual abuse trauma, overall trauma, and drug abstinence than standard treatment at a community residential facility. The most essential finding of this study is that the condensed *SS* intervention produced lower sexual abuse trauma symptoms at the 30 days posttreatment assessment as compared to the women who received only standard chemical dependence treatment. In addition, our findings reveal that the timeframe for a condensed version of *SS* can be as short as 3–4 weeks in order to reduce sexual abuse trauma symptoms for a period of at least 30 days after treatment has ended. Having a brief treatment intervention for women who are simultaneously afflicted with substance abuse and trauma-related symptoms is especially important for this population because their premature termination is high (Amaro, Chernoff, Brown, Arévalo, & Gatz, 2007), and financial barriers and consequences related to

being absent from their child-rearing and family responsibilities impact the type and amount of treatment that is feasible (Ruzek & Walser, 2000). Our findings indicate that the inclusion of a condensed version of *SS* (five to six sessions) within residential chemical dependence treatment for women may be considered a cost-effective treatment choice to reduce the psychological distress associated with sexual-abuse-related symptoms.

On the other hand, there was not sufficient statistical support for an advantage of the condensed *SS* intervention pertaining to overall trauma reduction as measured by either of the two instruments used (MPSS-SR and TSC-40). Overall trauma symptoms were reduced among women who received either the standard treatment or the condensed *SS* intervention. Moreover, our findings concerning drug abstinence at the 30 days posttreatment assessment were unexpected, as the women who participated in the condensed *SS* intervention actually had higher rates of relapse compared to the standard treatment group. It is plausible that including more sessions or additional *SS* topics may be required to receive the benefits of overall trauma symptom reduction and abstinence from drugs. Najavits (2002) reported that there is empirical support for relapse prevention as well as trauma symptom improvement after an average of at least 6 of the possible 25 *SS* sessions. Additionally, she recommended that *SS* be conducted over a longer time frame when the setting allows it, as the majority of the *SS* studies that report success in reducing trauma use more than six sessions (e.g., Hien et al., 2004; Zlotnick et al. 2003).

An additional finding of the current study is that it highlights particular trauma-related benefits that are gained when specific *SS* topics are presented. Najavits (personal communication, September 9, 2005) indicated that effectiveness of *SS* is not reliant on the specific selected topics nor the arrangement of topics, as they are all embedded with coping skills. However, the findings from the current research that suggests specific *SS* topics to include in brief treatment may have both practical and clinical utility (e.g., cost effectiveness of training and materials). We demonstrated that sexual-abuse-related trauma is reduced after women received interventions that addressed (a) the importance of safety, (b) trauma education, (c) coping skills to deal with trauma symptoms, (d) setting boundaries in relationships, (d) seeking help from safe people, and (e) committing to sobriety. Considering the concurrent mental health and substance-use-related needs and barriers of this population, future research that investigates the cost effectiveness and clinical efficacy of tailoring treatment topics to address specific treatment needs may have considerable merit.

There are some methodological limitations of this study. First, the small number of women in the sample as well as the inclusion of only one treatment facility limits the generalizability of our findings. In addition, the small number of participants who returned for the 30 days posttreatment assessment may have affected the statistical power to show results, thereby understating

differences between the two interventions. There was a low rate of return across both groups of women for the 30 days posttreatment assessment; however, we found that a higher rate of women from the condensed SS intervention group returned and completed their assessments. It is probable that participants' low return rates confounded the results at the 30 days posttreatment assessment. Whereas relapse may potentially be a factor in the low return rates, the limited economic resources of the sample may also have played a role in whether the women returned to complete their follow-up assessments. Another potential limitation is that the time frame for measuring trauma symptoms may have been too extended to accurately measure current trauma symptoms being experienced at the point of the 30 days posttreatment assessment. The TSC-40 inquires about trauma symptoms over the past two months, which would have included the time frame in which the women first entered their brief treatment. Future research may use additional assessment methods to measure trauma, specifically focusing on instruments that are time-specific to certain aspects of the study. Furthermore, we recommend future studies attempt to replicate our findings with both alcohol and drug-related outcomes. Notwithstanding these shortcomings and future research implications, our study provides support for a condensed version of SS that can be employed in residential treatment facilities for women who are concurrently addressing their comorbid substance abuse and trauma-related symptoms.

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