

Seeking Safety: An Intervention for Trauma-Exposed Incarcerated Women?

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Recent guidelines for incarcerated women's programming have called for interventions that address offenders' traumatic experiences, posttraumatic stress disorder (PTSD), and substance use in an integrated manner. Seeking Safety (SS) is an empirically supported cognitive behavioral manualized treatment for individuals with PTSD and substance use disorders. This study examined the effectiveness of SS with 59 incarcerated women who completed the intervention and 55 who were waitlisted. Participants in SS demonstrated greater symptom improvement in PTSD and depression as well as improved interpersonal functioning and coping as compared to waitlisted offenders. These findings provide preliminary support for the use of this intervention with incarcerated women.

KEYWORDS *incarcerated women, interpersonal violence, group treatment*

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In 2007, 105,500 women were serving a year or more under state or federal jurisdiction (Sabol & West, 2008). Conservative estimates indicate that almost half of incarcerated women are physically or sexually assaulted prior to imprisonment (Greenfeld & Snell, 1999). More recent studies of female prison and jail inmates have found rates of exposure to interpersonal violence (IPV) ranging from 80% to 98% (Bloom, Owen, & Covington, 2004; Green, Miranda, Daroowalla, & Siddique, 2005). In contrast, 12%–13% of male offenders report experiencing IPV in childhood or adult relationships.

In addition, roughly half of women confined in state prisons report using alcohol, drugs, or both at the time of their offense(s) (Greenfeld & Snell, 1999). Existing research also has demonstrated that female offenders have high rates of mental health problems (James & Glaze, 2006). Green and colleagues (2005) reported that 22% of incarcerated women in their interviews of female offenders in jail met criteria for posttraumatic stress disorder (PTSD). Guidelines issued by the National Institute of Corrections have noted the high rates of traumatic experiences, PTSD, and substance use among incarcerated women and have called for interventions that target all three of these issues in an integrated manner (Hills, Siegfried, & Ickowitz, 2004). However, in their review of incarcerated women's program needs, Green and colleagues (2005) noted that most corrections programming targets substance abuse education or treatment. Thus, there is a clear need for effective, integrated treatments to be implemented and evaluated in corrections settings.

Seeking Safety (SS) is a present-focused, manualized cognitive behavioral intervention developed to address co-occurring PTSD and substance use disorders (SUD; Najavits, 2002, 2009). SS aims to provide psychoeducation about the consequences of trauma and links between trauma and substance use; integrates cognitive, behavioral, and interpersonal topics; and teaches specific coping skills (Najavits, 2002). Participants are actively discouraged from describing traumatic experiences in detail. Although current research on individual PTSD treatment suggests that exposure-based treatment has good efficacy, a major concern regarding the generalizability of many of the efficacy studies of exposure-based therapies is that individuals with comorbid disorders (e.g., PTSD and SUD) are frequently excluded from these interventions (Spinazzola, Blaustein, & van der Kolk, 2005). There is also little available research on exposure work in group settings, a format frequently utilized in correctional settings because of limited resources.

SS has been evaluated with a number of different populations. Gatz and colleagues (2007) reported that adult women who participated in SS in addition to integrated SUD and mental health services demonstrated greater reduction of PTSD symptoms and improved coping as compared to women participating in residential treatment programs. Hien, Cohen, Miele, Litt, and Capstick (2004) compared the effectiveness of SS and relapse prevention

with nonstandardized community care treatment for 107 urban, low-income, treatment-seeking women. Participants' substance use and PTSD symptoms improved in SS and relapse prevention but not in the community care treatment.

In contrast, Hien and colleagues (2009) subsequently conducted a multisite randomized trial of the effectiveness of SS with 353 women enrolled in community-based substance abuse programs and did not find a difference in reduction in PTSD scores or substance abstinence between the women in SS and an active health education group. However, the authors noted that they reduced SS to 12 sessions and that participants attended an average of six sessions.

SS has also been assessed in two pilot studies as an intervention for women in correctional settings (Zlotnick, Johnson, & Najavits, 2009; Zlotnick, Najavits, Rohsenow, & Johnson, 2003). In 2003, Zlotnick and colleagues conducted a pilot study with 17 residents of a voluntary substance abuse treatment program housed within a minimum security prison. Participants attended an average of 14 sessions. There were significant decreases in the women's report of PTSD symptoms posttreatment and at a 3-month follow-up postrelease. However, there was no comparison group for this study.

More recently, Zlotnick and colleagues (2009) recruited participants from an intensive substance abuse treatment program located in a minimum security prison and compared 27 randomly assigned SS plus treatment as usual (TAU) participants to 22 offenders who participated in TAU alone. TAU was intensive programming for approximately 30 hr per week for 3–6 months. SS participants attended an average of 15 group sessions and 3 individual booster sessions in addition to TAU. Participants in both treatment conditions improved significantly on assessed outcomes for PTSD, SUD, psychopathology, and legal problems. However, there were no differences between the SS participants and (the programming-intensive) TAU participants. The authors of this study noted the potential for contamination between the two conditions, as the same clinicians provided both treatments (and it is unclear to what extent SS materials or concepts may have been integrated into TAU) and participants lived in a communal setting and could have shared information or materials.

The goal of the present study was to assess the effectiveness of SS in a group format with incarcerated women who were receiving typical prison programming (e.g., educational services; substance abuse relapse prevention; work-related skills; and some specialized classes focused on topics such as changing thinking patterns, anger management, or parenting skills). We hypothesized that SS participants would show greater improvement in PTSD, depression, interpersonal skills, and coping strategies than waitlisted individuals. Depression was targeted in addition to PTSD given the high comorbidity of these disorders in trauma survivors (Breslau, Davis,

Peterson, & Schultz, 2000). In addition, coping and interpersonal skills were measured in an effort to assess changes in the range of coping strategies utilized by participants as well as their interpersonal functioning, given that these areas are targeted by the intervention. The level of substance use was not assessed at the second interview, as incarcerated women allegedly did not have access to alcohol or illegal drugs while in prison and thus no change in this variable was expected.

METHODS

Participants

The 114 participants in the treatment and waitlist conditions ranged in age from 19 to 60 ($M = 34.17$ years, $SD = 9.735$). Interviewees could indicate all applicable ethnic groups and endorsed the following: Caucasian (84%), Native American (15%), Hispanic (12%), African American (3%), and Asian American/Pacific Islander (3%). These endorsement rates are similar to the overall corrections population in the region in which the data were collected but significantly overrepresent ethnic minorities compared to the general population in this region (94% Caucasian or White). The majority of this sample indicated that they had obtained a general equivalency diploma (33%) or completed some college (21%). Almost half (45%) had been employed full time prior to incarceration, with a mean income of \$15,601.34 ($SD = \$25,839.30$).

The majority of the women in this sample were incarcerated for non-violent crimes (e.g., property damage such as burglary, forgery [$n = 50$], or drug-related crimes [$n = 48$]). The participants had been incarcerated for an average of approximately 14 months ($SD = 18.186$) in a northwestern women's state prison at the time of the pretreatment interview. The majority had been incarcerated before.

Measures

Demographics questionnaire. This measure assessed participant age, ethnicity, education, employment status, relationship and parenting status, number of times incarcerated, length of incarceration, and charges.

Trauma History Questionnaire (Green, 1996). This 24-item measure assesses exposure to various types of trauma: crime-related events, general disasters, and experiences of physical and sexual IPV. The Trauma History Questionnaire demonstrated good reliability over a 2- to 3-month interval, with total measure test-retest correlations ranging from .54 to .92 (Green, 1996). In this study, frequency response (never = 0, once = 1, a few times = 2, and many times = 3) for the four items assessing forced sexual intercourse, forced sexual contact, physical aggression without a weapon,

and physical aggression with a weapon were summed to represent a total score for IPV.

PTSD Checklist–Civilian Version (PCL; Weathers, Litz, Huska, & Keane, 1994). The PCL was used to assess symptoms of PTSD during the past 30 days. Each of the 17 items is rated on a 5-point scale (1 = *not at all*, 5 = *extremely*). PCL scores range from 17 to 85, with scores greater than 50 indicating severe symptoms of PTSD; this measure demonstrated high internal consistency and convergent validity in a psychometric study (Ruggiero, Ben, Scotti, & Rabalais, 2003). For this study, internal consistency at the initial interview was strong ($\alpha = .825$).

Alcohol and Drug Use History Questionnaire (adapted from Specht & Cellucci, 2005). This measure assesses the presence/absence of *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.) criteria for substance dependence prior to incarceration. Participants were asked whether they had experienced 14 criteria-based problems related to alcohol and/or drug dependence prior to incarceration and indicated the type of substance.

Center for Epidemiological Studies–Depression scale (CES-D; Radloff, 1977). The CES-D is a widely used 20-item self-report measure of depression on which participants endorse the frequency of various symptoms during the past week using a 4-point Likert-type scale. A cutoff score of 16 has been recommended and is widely used to suggest the presence of depressive symptoms (Radloff, 1977). In this study, the internal consistency of this measure at the baseline interview was good ($\alpha = .887$).

Brief COPE (Carver, 1997). The Brief COPE consists of 28 items for which participants endorse the frequency of utilizing that coping skill. For the purposes of this study, responses from all participants who completed pretreatment interviews (i.e., including women for whom we did not have a second wave of data; $N = 162$) were factor analyzed using principal component analyses, and 19 of the 28 items loaded (.468–.765) onto two factors. The first factor, Adaptive Coping, consisted of 13 items related to taking action, planning, positive reframing, seeking emotional and instrumental support, accepting stressful events, and spirituality. Six items loaded onto the second factor, Maladaptive Coping, reflecting coping strategies of disengagement, denial, and self-blame. Items that loaded at .468 and above on each factor were summed to create the pre- and posttreatment scores for adaptive ($\alpha = .846$) and maladaptive ($\alpha = .720$) coping.

Inventory of Interpersonal Problems (IIP; Guttle, Moum, Kaldestad, & Friis, 2000). The IIP is a 48-item measure of interpersonal relating on which participants use a 5-point scale to rate how often they have experienced various interpersonal difficulties, including being too open, aggressive, caring, and dependent as well as having difficulty with being assertive, involved, supportive, or sociable. A total score representing interpersonal difficulties is obtained by summing the items. The IIP demonstrated good internal consistency in this study ($\alpha = .822$).

Procedures

Participants were recruited over a 3-year period to participate in SS group treatment. The women lived in a state prison facility housing minimum and medium security inmates. SS groups met twice weekly, 2 hr per session, for approximately 12 weeks. To be included, participants had to report a trauma history, a history of SUD, and moderate to severe PTSD symptoms (score of 30 or greater on the PCL). In addition, they were required to be proficient in English, to be age 18 or older, and to be eligible for release from prison within 3 years. A total of eight groups were offered, with group sizes ranging from 8 to 15 members. Research team members visited each prison tier/cell block, briefly described SS, and explained that it was for women with histories of abuse or trauma and substance dependence. Offenders were invited to sign up on a list to indicate their interest in participating. This list of names was then reviewed by prison staff, who determined who could participate based on a release date within 3 years, availability in their schedule at the time the intervention would be offered, and the likelihood of remaining in that specific facility for 12 weeks or more. The majority of interested offenders were cleared by prison staff for participation. The most common reason provided for not allowing participation was that staff were anticipating moving the offender to another facility. Cleared offenders were then screened in a brief interview for a history of trauma, substance use, and PTSD symptoms (PCL score of 30 or higher). During the screening interviews, 16 inmates did not meet criteria: 9 women were below cutoffs on the PCL and 7 women denied a history of substance use. Everyone who met criteria was invited to participate in SS groups at the current time or be waitlisted as well as to complete pre- and posttreatment interviews.

During the initial and follow-up interviews, participants met individually with interviewers who read the consent and all questionnaires aloud while the participants followed along with their own copy so that women of all reading abilities could provide informed consent and be included in the study. Inmates were provided with a certificate of participation and a candy bar as compensation. Participation in the interviews was voluntary in this institutional review board–approved study.

After the initial interview, participants were assigned to the treatment or waitlist condition on the basis of anticipated release or transfer dates. This method of assignment was chosen because the prison administration could not support keeping all participants (treatment and waitlist) for the 24 weeks necessary to offer waitlist and treatment via random assignment; thus, prison staff ultimately determined which inmates would receive treatment immediately or after a waitlist period based on estimated release/transfer dates. SS participants were invited to complete a follow-up interview at the end of the second-to-last group session, and waitlisted individuals were contacted by a research team member and asked whether they wished to participate in a second interview.

A total of 162 female offenders completed pretreatment interviews. Of these women, 44 did not complete a posttreatment interview, primarily because they were transferred to another facility during the study ($n = 34$). A few declined treatment after the pretreatment interview ($n = 5$) or were removed by the prison from all programming because of disciplinary infractions ($n = 5$). One woman who completed the treatment and the research interviews was excluded from the analyses as she had an initial PCL score below 30, and three were excluded because they did not meet full criteria for SUD prior to incarceration. Thus, the final sample included 114 individuals: 59 women in the treatment condition and 55 women who completed the measures initially and then after a 12-week waiting period.

RESULTS

Descriptive Statistics

Study participants endorsed multiple experiences of trauma prior to incarceration. Specifically, 72% reported forced sexual intercourse, 56% were attacked with a weapon, and 86% were attacked without a weapon. The majority also indicated multiple experiences of the same type of violence: 55% reported two or more distinct experiences of sexual assault, 32% reported two or more physical attacks with weapons, and 76% reported two or more physical attacks without a weapon.

The women reported that prior to incarceration, their most frequent drug of choice was methamphetamine ($n = 64$), followed by alcohol ($n = 16$) and marijuana ($n = 13$). Participants also reported using cocaine ($n = 9$) and opiates ($n = 6$). Participants in the study were also psychologically distressed. The majority (81%) were above the cutoff score of 16 used for the CES-D ($M = 28.868$, $SD = 11.833$), and 62% were above the cutoff of 50 used to indicate severe symptoms of PTSD on the PCL ($M = 53.404$, $SD = 11.237$). Fifty women reported current use of psychotropic medications; 23 were treatment participants and 27 were waitlisted individuals.

Group Differences: Treatment Participants, Waitlisted Participants, and Non-Completers

Women who completed two interviews ($n = 114$) differed from the 44 offenders who did not complete a second interview in the following ways. At the time of the initial interview, study participants were incarcerated longer ($M = 13.78$ months, $SD = 18.186$) than were those who did not complete a second interview ($M = 8.390$ months, $SD = 12.112$), Levine's test $F = 4.669$, $p < .032$, $t(116.747) = -2.160$, $p = .033$. Study participants also endorsed more interpersonal difficulties ($M = 1.638$, $SD = 0.594$) than did

those who did not complete a second interview ($M = 1.362$, $SD = 0.596$), $t(156) = -2.616$, $p = .010$. Study participants did not differ significantly from non-completers regarding other demographic variables, symptoms of PTSD, depression, or utilization of coping strategies. Women who did not complete a second interview were equivalently distributed across the SS and waitlisted groups.

Treatment participants were younger ($M = 32.37$ years, $SD = 9.142$ vs. $M = 36.09$, $SD = 10.010$), $t(112) = 2.073$, $p = .040$; and less educated ($M = 4.49$, $SD = 1.580$ vs. $M = 5.58$, $SD = 1.950$), $t(112) = 3.290$, $p = .001$, than waitlisted participants. There were no differences in regard to trauma exposure, initial PTSD or depression scores, coping, interpersonal functioning, or substance use history. As expected given that the prison administrators used release dates to determine assignment to the intervention versus the waitlist, time remaining prior to eligibility for release was significantly different for the two groups: The treatment participants indicated a mean of 295 days ($SD = 307$) prior to release, whereas the waitlisted individuals reported 447 days ($SD = 334$) remaining, $t(97) = 2.352$, $p < .021$. However, remaining time was not significantly correlated with participants' distress levels at the initial or follow-up interviews.

Treatment participants attended an average of 18 of the 24 sessions ($M = 17.932$, $SD = 5.682$). At the time of the initial interview, the women endorsed prior participation in the following programs: general equivalency diploma education (48%), SUD-focused cognitive reframing programs (45%), relapse prevention (44%), domestic violence programs (21%), parenting education (25%), gender-specific SUD programming (29%), and anger management (33%). It is important to note that between the initial and follow-up interviews, significantly more women in the waitlist (WL) condition than women in the treatment (TX) condition participated in anger management ($n_{TX} = 4$ and $n_{WL} = 11$; $\chi^2 = 6.812$, $p = .009$). However, anger as assessed by the aggression subscale of the IIP did not differ between the two groups pre- or posttreatment. In addition, participation in an anger management group did not interact with the treatment versus waitlist condition for any of the identified outcome variables and thus was not included as a covariate in the primary analyses.

Primary Analyses

Prior to conducting analyses to test the stated hypotheses, we conducted preliminary analyses that detected significant associations among demographic characteristics and outcome variables. Frequency of lifetime IPV was associated with initial levels of PTSD ($r = .286$, $p = .002$) and depression symptoms ($r = .259$, $p = .006$) as well as follow-up depression scores ($r = .225$, $p = .017$). Education level was negatively associated with initial depression symptom levels ($r = -.204$, $p = .031$). Women of color reported

higher initial levels of adaptive coping ($M = 37.906$, $SD = 6.731$) than did Caucasian women ($M = 34.439$, $SD = 7.583$), $t(112) = -2.261$, $p = .026$. These variables were subsequently included as covariates in the relevant repeated measures analyses of covariance (ANCOVAs).

Five repeated measures ANCOVAs were utilized to test for differences in PTSD, depression, interpersonal functioning, adaptive coping, and maladaptive coping between the initial and follow-up interviews for women in SS in comparison to the waitlisted offenders. Cases were excluded listwise if total scores were missing for a specific analysis. Total scores were generated using the average score on scale or subscale items unless more than 25% of the items were left blank/declined. Initial and follow-up scores are listed for the treatment and waitlisted groups in Table 1. Effect sizes for significant main effects and interactions were calculated using raw means in the following equation: $d = M_1 - M_2/s_{\text{error}}$. Using this formula, we calculated an effect size for the treatment and waitlist conditions and report here the difference between the two conditions and the 95% confidence interval (CI) for these effect sizes (Howell, 2007).

In the first repeated measure ANCOVA, which assessed change in PTSD symptoms, IPV was a covariate. There was a significant within-group main effect for time, $F(1, 107) = 4.108$, $p = .045$, partial $\eta^2 = .037$, suggesting that both treatment and waitlisted participants showed significant decreases in PTSD symptoms. However, there was also a significant interaction between PTSD scores and treatment condition, $F(1, 107) = 4.610$, $p = .034$, partial $\eta^2 = .041$, suggesting that the women in the treatment condition showed more significant decreases in PTSD at the follow-up interview than did the waitlisted women, with a medium effect size of .557 ($d_{\text{TX}} = 1.334$, $d_{\text{WL}} = .777$, 95% CI = -24.947 to 26.003).

The next repeated measure ANCOVA was used to assess for a treatment effect on depression. IPV, age, and level of education were included as

TABLE 1 Mean (*SD*) Initial and Follow-Up PTSD, Depression, Interpersonal Functioning, and Adaptive and Maladaptive Coping Skill Scores for the Treatment ($n = 59$) and Waitlisted ($n = 55$) Participants

Variable	Initial scores	Follow-up scores
PTSD TX	52.118 (10.503)	35.915 (12.069)
PTSD WL	55.396 (11.666)	45.000 (14.262)
Depression TX	27.983 (11.299)	17.355 (10.238)
Depression WL	29.812 (12.414)	26.818 (12.739)
Interpersonal TX	1.677 (0.594)	1.299 (0.596)
Interpersonal WL	1.597 (0.596)	1.469 (0.575)
Adaptive coping TX	36.576 (6.722)	39.119 (6.810)
Adaptive coping WL	34.164 (8.112)	33.927 (8.153)
Maladaptive coping TX	13.051 (3.506)	9.915 (3.136)
Maladaptive coping WL	12.782 (4.012)	12.054 (3.412)

Notes: PTSD = posttraumatic stress disorder; TX = treatment; WL = waitlist.

covariates. Main effects of time and group were not significant. However, there was a significant interaction between depression scores over time and treatment condition, $F(1, 109) = 13.068$, $p = .000$, partial $\eta^2 = .107$, such that women in the treatment group showed significantly more decreases in depression scores at follow-up than did the women who were waitlisted. For depression, the effect size was .677 ($d_{TX} = .955$, $d_{WL} = .278$, 95% CI = -22.223 to 23.571).

The ANCOVA used to assess changes in interpersonal functioning revealed no main effects but demonstrated a significant interaction between interpersonal functioning and the treatment condition, $F(1, 110) = 7.108$, $p = .009$, partial $\eta^2 = .061$, such that women in the treatment condition demonstrated significantly higher follow-up interpersonal functioning scores than did waitlisted women, with an effect size of .416 ($d_{TX} = .699$, $d_{WL} = .282$, 95% CI = -0.589 to 1.421).

Ethnicity and relationship status were also included as covariates in the fourth repeated measures ANCOVA, which assessed for a treatment effect for adaptive coping. However, none of the covariates demonstrated significant between-subjects main effects. The interaction between time and treatment condition was significant, $F(1, 108) = 5.252$, $p = .024$, partial $\eta^2 = .046$, as women in the treatment condition showed significantly more improvements in adaptive coping from baseline to follow-up than did the waitlisted participants. For adaptive coping, the calculated effect size was smaller at -.343 ($d_{TX} = -.313$, $d_{WL} = .030$, 95% CI = -15.399 to 16.084).

In the final repeated measures ANCOVA testing for a treatment effect in changes in maladaptive coping, only the interaction between treatment condition and time was significant, $F(1, 110) = 9.899$, $p = .002$, partial $\eta^2 = .083$; thus, women who participated in SS demonstrated more significant decreases in maladaptive coping strategies over time than did the women who were waitlisted. This yielded a medium effect size of .661 ($d_{TX} = .840$, $d_{WL} = .179$, 95% CI = -7.279 to 8.601).

Reliable change indices (RCIs) were also calculated to provide further information about the extent of individual improvement in addition to the significant differences noted by comparing group means and generating effect sizes. To calculate an RCI, we subtracted each participant's pretreatment score (X_1) from her posttreatment score (X_2) and then divided by the standard error of the difference between the two test scores ($RCI = X_2 - X_1 / S_{diff}$), where $S_{diff} = \sqrt{2(SE)^2}$ and SE is the standard error of measurement (Jacobson & Traux, 1991). The RCI value provides the measure-specific minimum units of change required for a statistically significant change for each individual participant. Greater numbers of treatment participants indicated reliable improvement in symptoms of depression, interpersonal difficulties, and maladaptive coping as compared to the waitlisted group (see Table 2).

TABLE 2 Percentage of Participants with Reliable Improvement on PTSD, Depression, Interpersonal Difficulties, and Adaptive and Maladaptive Coping Scores by Treatment Condition

Variable	RCI	Treatment	Waitlist	χ^2
PTSD	12.829	56% ($n = 33$)	40% ($n = 22$)	2.623 ($p = .105$)
Depression	10.830	46% ($n = 27$)	18% ($n = 10$)	9.934 ($p = .002$)
Interpersonal difficulties	0.6889	24% ($n = 14$)	9% ($n = 5$)	4.391 ($p = .036$)
Adaptive coping	8.592	22% ($n = 13$)	13% ($n = 7$)	1.170 ($p = .192$)
Maladaptive coping	5.553	27% ($n = 16$)	11% ($n = 6$)	4.80 ($p = .028$)

Notes: PTSD = posttraumatic stress disorder; RCI = reliable change index.

DISCUSSION

The majority of the participants in this study reported numerous traumatic experiences, moderate to severe symptoms of PTSD and depression, and dependence on methamphetamine. Prior to the treatment, approximately half of the women indicated that they had received education programming, substance abuse education and prevention, and cognitive reframing classes, whereas a quarter described receiving classes in domestic violence and parenting prior to the study. Yet the sample appeared distressed and similar to those described in other surveys of incarcerated women (Bloom et al., 2004; Green et al., 2005). Thus, there is clearly a demonstrated need for interventions that address complex treatment needs.

In this study, participants in both conditions demonstrated improvements in PTSD symptoms. However, offenders who participated in SS appear to have benefited significantly more than the waitlisted individuals given their decreased symptoms of depression, improved interpersonal functioning, and decreased maladaptive coping, as indicated by the RCIs. Although the treatment gains from the time-limited SS intervention are modest, given the extent of trauma exposure and distress reported by these study participants, these results are promising and suggest the need for further assessment. Most likely, making true progress in providing effective treatment to female offenders will require empirical interventions that are sufficient in length and scope to address the needs of individuals with multiple and chronic trauma experiences, including those individuals with complex traumatic stress disorders (Courtois & Ford, 2009).

There are several important limitations to this study. First and foremost, we were not able to randomly assign participants to the treatment and waitlist conditions; therefore, we cannot rule out the possibility that preexisting differences were responsible for differences between the groups rather than the treatment. Women who received treatment had earlier release dates. Women approaching release typically transfer to either a treatment unit or a work release center for several months. It is unclear to what extent

anticipating these changes may have influenced women's distress levels. It is important to note that time remaining was not correlated with either initial or follow-up scores on any of the distress variables. However, the difference in time remaining also has the potential to influence what other programming the women were assigned by the prison staff, and optimism about transferring sooner may have influenced the reduction of distress in the treatment group. In this study, there were few differences between the waitlisted and treatment participants regarding participation in other programming. However, we still cannot attribute the observed improvements to SS without the greater experimental control provided via random assignment. It is also possible that the results may be due to participation in a structured group rather than to the specific SS treatment. Further research is necessary to examine whether it is participation in a structured, supportive group or the SS treatment that produces change. It would also be beneficial to use an intent-to-treat design in future studies to address differences between study participants and non-completers. In addition, we did not assess substance use given that the participants were incarcerated. However, future studies with similar populations could include assessment of substance use risk factors pre- and posttreatment in order to better assess the likelihood of SS reducing relapse postrelease.

Next, over the course of the groups, we learned that some treatment participants were sharing their handouts and group materials with other individuals on their cell blocks. Thus, although there were significant treatment effects, it is unclear to what extent the sharing of materials may have attenuated the size of the differences found between the groups. Finally, it will be important to locate these participants postrelease and assess whether these modest treatment effects are maintained postrelease. At this time, the preliminary findings from this study support further research examining the use of SS in a group format with incarcerated women.

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