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Peer-Led Seeking Safety: Results of a Pilot Outcome Study with Relevance to Public Health

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Abstract — There is a rich history of peer-led recovery efforts related to substance use disorder (SUD). Yet we know of no peer-led approaches for co-occurring SUD and trauma-related problems. This combination is widespread, has impact on multiple life domains, and presents major recovery challenges. In this pilot, we evaluated peer-led Seeking Safety (SS). SS is the most evidence-based and widely implemented therapy for SUD with co-occurring PTSD or other trauma-related problems. Eighteen women in residential substance-abuse treatment participated. All met SUD criteria (primarily opiate and cocaine dependence); most had a comorbid mental health disorder; and they had elevated trauma-related symptoms. The 25 SS topics were conducted twice-weekly. Participants were assessed at baseline and end-of-treatment, with some measures also collected monthly. Results showed significant positive outcomes in *trauma-related problems* (the Trauma Symptom Checklist-40); *psychopathology* (the Brief Symptom Inventory); *functioning* (the BASIS-32, including impulsive-addictive behavior); *self-compassion* (the Self-Compassion Scale); and *SS coping skills*. Effect sizes were consistently large. SS satisfaction and fidelity ratings were high. Substance use levels could not be assessed due to the residential setting. Qualitative data indicated enthusiasm for peer-SS by both peers and staff. Study limitations, future research, and public health relevance are discussed.

Keywords — outcome, peer, pilot, substance abuse, substance use disorder, trauma

Peer-led supports for substance use disorder (SUD) began 275 years ago (White 2009). Since then, and particularly in the twentieth century, they have developed and expanded to include worldwide group models such as Alcoholics Anonymous and its many variants, such as Narcotics Anonymous, Cocaine Anonymous, and others, as well as peer-based housing, peer counselors, and peer coaches. Peer efforts are also of strong interest in the current context of recovery-oriented systems of care and cost-efficient methods to provide support services (Substance Abuse and Mental Health Services Administration 2009).

In the area of co-occurring disorders (COD), there have also arisen several peer-led models, such as Dual Disorders Anonymous (started in 1982), Dual Recovery Anonymous (started in 1989), and Double Trouble in Recovery (started in 1993). Small pilot studies indicate some support for these, although the literature is very limited (White 2009). Moreover, there are relatively few such

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groups in existence and they tend to cluster in a limited number of cities without widespread adoption elsewhere. In the trauma field, there have also been attempts to develop some self-help approaches, including Survivors of Incest Anonymous (started in 1982), and "rap groups" for military veterans in the 1970s. In recent years, various *ad hoc* trauma recovery "meetups" and other peer supports have arisen as well. One major challenge of trauma-related self-help groups is that they tend to focus on "telling the story" of members' trauma histories, which can be triggering and destabilizing for some (Holmes 2003; see also www.siawso.org).

We know of no self-help groups developed nor evaluated specifically for co-occurring SUD and trauma-related problems. Yet this combination is one of the most common and clinically important in terms of its impact on multiple domains of life functioning (Ouimette & Brown 2002; Najavits et al. 2008). In this pilot study, we sought to evaluate the Seeking Safety (SS) model as a peer-led approach.

SS is a widely used, evidence-based model. It was originally designed for posttraumatic stress disorder (PTSD) and SUD, but over time has been applied more broadly to other populations as well. It is widely implemented for people with just one or the other disorder, a history of them, subthreshold, trauma-related problems (rather than PTSD per se), and as a general model to increase stabilization. It is a present-focused cognitive-behavioral therapy offering 25 topics (which the clinician can use in any order, with as many as time allows). Each topic is a *safe coping skill,* including: Honesty, Asking for Help, Setting Boundaries in Relationships, Getting Others to Support Your Recovery, Healthy Relationships, Compassion, Creating Meaning, Discovery, Integrating the Split Self, Recovery Thinking, Taking Good Care of Yourself, Commitment, Respecting Your Time, Coping with Triggers, Self-Nurturing, Red and Green Flags, Detaching from Emotional Pain (Grounding), and Life Choices.

Key features of the model (Najavits 2009) are listed below. We believe such features are highly convergent with peer implementation.

- *Early-stage treatment* that can be used from the start of treatment.
- *Teaches coping skills* to help build safety and resilience.
- *Present-focused* to address current issues (without delving into detailed exploration of the past).
- *Idealistic*, striving to build hope.
- *Integrated treatment* to address trauma and substance abuse at the same time if both are present.
- *Targets four domains*: cognitive, behavioral, interpersonal, and case management to help the "whole person."
- *Can be used at the same time as any other model.*
- *Public health emphasis*: low cost, and can be used by almost any clinician, client, and program.
- *Broadly applicable:* for both genders, group or individual modality, any setting, any trauma type, any substance type; and can be used in conjunction with any other treatment.
- *Compassionate tone*: honoring what clients have survived and respecting their strengths.
- *Practical*: focusing on rehearsal of new skills, psychoeducation, and specific tools to promote recovery.
- *Relevant to different subgroups*: successfully used with adolescents, military, veterans, homeless, domestic violence, criminal justice, racially/ethnically diverse, mild traumatic brain injury, people who cannot read, and others.
- *Uses simple, engaging language*: avoiding jargon and long words; the goal is emotionally compelling words, such as "safety," "respect," "honor," and "healing."

The SS manual (Najavits 2002) and www.seekingsafety.org offer more detailed background and a description of the model.

SS is the most *evidence-based* model for co-occurring trauma-related problems and SUD, with over 20 studies. Overall, the model has been researched with a broad range of clients and typically chronic and severe populations. It has shown consistent positive outcomes on a wide range of variables and strong client satisfaction. In comparative trials, it typically has outperformed the control condition (see Najavits & Hien 2013, for a review).

In this project, we focus on a sample with SUD plus trauma-related problems rather than PTSD. The peer recovery movement generally focuses on problems rather than psychiatrically defined symptoms and disorders. This focus is also more inclusive, more feasible, and more generalizable.

METHODS

Study Site

The project was conducted in a residential substance-abuse treatment program in Florida (Welsh et al. 2010). The program focuses on women ages 18 and older, and their children. No specific treatment for trauma or PTSD was provided in the program other than SS.

Seeking Safety

SS is described in detail elsewhere (Najavits 2002; 2009). For this pilot study, the model was used as-is in terms of the SS format, handouts, and overall conduct of the sessions.

Parameters for Peer-Led SS

Several parameters were put in place for peer-SS to help promote its success in this new modality. Most are

not adaptations per se, as most are inherently part of the flexibility of SS and thus represent a matter of emphasis rather than actual changes. Also, future peer-SS efforts could be conducted using other guidelines; this list is not a requirement but rather appeared to fit this pilot project.

1) *There was a guide and co-guide*. The guide facilitated the session and the co-guide assisted by monitoring time, keeping the session true to the SS format, and watching the room for any participant worsening during the session (e.g., dissociation). The SS guides had the full SS book and the participants received the SS handouts from the book.
2) *To prevent unsafe sharing and monopolizing time, each participant had a maximum of five minutes to speak during any sharing*. (This guideline was not enforced in practice as it did not appear necessary, according to the onsite collaborators.)
3) *For trauma and substance use, a "headlines not details" framework is followed*. "Headlines" refers to the naming of trauma or substance abuse types in a phrase or two, but without a detailed description. For example: "I was molested as a child," "I was a coke addict for 20 years," "I drank this week." As SS is a present-focused coping skills model, the idea is to prevent "war stories" or details that could trigger the individual or the group. If a peer did start to launch into a more detailed version, per the SS manual, the guide redirected her back to the present. For example: "How does that affect you today?" and "That sounds like an important part of your story, but to keep the group safe for all, I hope you'll be okay if I guide you to focus back on the present."
4) *The list of SS* Safe Coping Skills *was displayed during sessions*, posted on the wall using either the SS poster or a copy of the list from the SS book (pages 103–108).
5) *Grounding was to be used* if any participant became overly distressed. For example, if a peer began to dissociate or was unable to respond to verbal redirection, the guide was instructed to immediately assist via use of the SS grounding techniques (Najavits 2002; pages 133–134). However, there were no instances of any participant becoming overly distressed during the pilot study.
6) *A trained professional would be sought if any distress could not be contained or if anyone appeared truly unsafe* (e.g., suicidal intent, threatening harm). Such assistance could occur during or after the session and might include calling a hotline, contacting the participant's therapist or doctor or an onsite clinician, or taking the participant to an emergency room or local treatment facility.
7) *The SS Adherence Scale–Brief Version (Najavits et al. 2007) was used.* It was completed after the session by the guide and co-guide and they discussed any discrepancies in their ratings, as well as ways to improve fidelity to the model if needed.

Participants

Study inclusion criteria were: a plan to remain in the residential program for a minimum of six months; willing to provide informed consent; and having been in the residential program for at least 90 days. The 90-day criterion was used as this was a first study on a peer model in the residential program and staff wanted to engage clients who had already acclimated to the setting. No attempt was made to include nor exclude participants based on any other characteristics as our goal was to obtain a representative sample. PTSD was not a requirement for the study; as noted earlier, SS is often used in substance abuse programs as a general coping skills model regardless of formal PTSD diagnosis and in recognition that many people in substance abuse treatment have subthreshold PTSD or trauma-related problems. In this study, the women had the latter. This focus also heightens relevance for peer-led recovery, in which problems are emphasized rather than diagnostic syndromes.

Twenty-five women volunteered for the study. Because this was too many for the SS peer-led group, names were drawn randomly, with a few extra in the event of drop-outs. However, as everyone always attended, the extras were never incorporated into the group. A total of 18 women participated. All were group members and, in addition, seven of the women served as rotating peer guides (each serving for four weeks). Results are reported for the full sample of 18 throughout. Participants received no payment for participating in the group nor in the study; however, they were given intermittent rewards such as dinner or ice cream after completing the measures or before the peer SS group session. No participant reported receiving other trauma-focused or PTSD treatment during the study.

Peer Guides

Seven of the participants served as peer guides in rotating cycles of four weeks each. Each guide was thus primarily a participant, but also served for one month as a guide. Criteria for becoming a peer guide in this project were: having basic stability (good standing in the community with no major behavioral problems), plus attendance at a standard three-hour SS training (using the SS training videos). In addition, they could optionally attend other trainings that were offered as part of the treatment program (e.g., women's leadership program focused on vocational and social self-improvement; Amaro et al. 2004).

Conduct of Sessions

A clinical staff member trained in SS was present before, during, and after group sessions in case a participant experienced difficulties. The staff member also filled out the SS Adherence Scale-Brief Version and met with

guides at the conclusion of each session to debrief and review the adherence scale. The inclusion of a staff member during the peer sessions was both a precaution to protect participants in case of an adverse event and a medico-legal requirement of the treatment setting. However, staff observing each group did not speak nor participate in any way in the session other than filling out the rating sheet at the end of the session. Participants were informed that they could leave the group at any time, that staff were available to talk with clients who needed to leave, and that guides were available to talk to participants following the group discussion.

Measures

All measures were selected for their relevance to SS outcomes and their psychometric validation. We did not include a measure of SUD as clients in residential treatment often do not have recent (e.g., past-month) substance use. Moreover, they are not allowed to use during residential care, which means that substance use reporting would be either naturally very low and/or could lead to dishonest reporting due to the consequence of being potentially removed from care. To minimize client burden, all measures were collected at baseline and end-of-treatment, except for two measures that were considered important to collect monthly (see below). Also, to reduce the likelihood of Type I error in this small pilot study, we used only the total or mean score for each measure, without subscale scores, unless otherwise noted.

The Trauma Symptom Checklist-40 (TSC-40; Briere 1996) has 40 trauma-related problems scaled 0 (*never)* to 3 *(often).* It was collected monthly as it addressed the key SS topic of trauma symptoms. The TSC-40 is highly convergent with measures of PTSD (Gold & Cardena 1998).

The BASIS-32 (Eisen et al.1999) has 32 items to assess functioning, with items rated 0 (*no difficulty*) to 4 (*extreme difficulty*). This measure was collected monthly as it addresses the core issue of functioning, which is the central target of the SS treatment. We include both the mean across items and the impulsive addictive behavior subscale, as the latter is associated with SUD, which is a key focus of SS.

The Brief Symptom Inventory (BSI; Derogatis 1983) evaluates psychopathology symptoms, with 53 items scaled from 0 (*not at all*) to 4 (*extremely*). Two summary scores are included in this paper: the global severity index and positive symptom distress index. The BSI has relevance to this project as it addresses a broad range of psychopathology common in SUD populations.

The SS Coping Scale (Najavits 1995; adapted by Gatz et al. 2007) assesses the degree to which participants report using 17 specific coping skills from SS, scaled from 0 (*not at all*) to 5 (*extremely*). The SS Coping Scale shows strong psychometric properties, including Cronbach's alpha of .90, sensitivity to change over time, and positive performance as a mediator of outcomes (Gatz et al. 2007).

The Self-Compassion Scale (Neff 2003) has 26 items on a five-point scale scaled 1 (*almost never*) to 5 (*almost always*) to measure aspects of compassion such as self-kindness, common humanity, and mindfulness. It is included as a major feature of SS is its focus on building self-compassion in relation to both trauma and SUD.

The SS Adherence Scale-Brief Version (Najavits et al. 2007), scaled 0 (*low adherence*) to 3 (*high adherence*), was used to assess fidelity. It was based on full sessions and was completed by the staff member observing the session.

The Client Satisfaction Scale (CSQ; Larsen et al. 1979) scaled 1 (*low satisfaction)* to 4 (*high satisfaction*) was obtained at the end of treatment only.

The SS End of Session Questionnaire (Najavits 2002) assessed participants' ratings of satisfaction with the SS topics and format, scaled on helpfulness from 0 (*not at all*) to 3 (*a great deal*). It was completed after each session.

Focus groups were conducted by research staff to obtain qualitative feedback.

Data Analysis

We used mixed effects modeling as our primary analytical approach to account for the clustered structure of the data (i.e., repeated assessments within an individual). Specifically, we used the Mixed Model Analysis of Variance (MMANOVA) approach (Schwarz 1993), which models all available data for each participant and is thus especially useful with datasets such as ours where some measures were collected more frequently than others. To address non-normality, square or square root transformations (Box & Cox 1964) were applied to improve the approximation of normality. For effect size calculations, we used Cohen's d to compare two timepoints (baseline versus end-of-treatment); for variables with more than two timepoints, we used eta-squared as the latter does not assume linear change over time. Effect sizes are interpreted using standard benchmarks (Koenig et al. 1992): for Cohen's d .8 is large, .5 is medium, and .2 is small; for eta-squared, .14 is large, .06 is medium, and .01 is small.

RESULTS

Participant Characteristics

Participants averaged 29.06 years of age (SD= 7.17). Ethnicity/race was primarily Caucasian (n=14; 77.8%); with four minority (22.2%). The latter were two mixed-race, one African American, and one Hispanic. Eight participants (61.5%) never married, four were divorced (30.8%), one was separated (7.7%), and five did not respond (38.5%). One participant (5.6%) completed some high school, five (27.8%) completed high school or a GED, six (33.3%) completed some college, one (5.6%) completed four-year college, and five did not respond (38.5%).

Fifteen participants (83.3%) were court-ordered to attend the treatment program; however, peer-led SS was voluntary within the program.

DSM-IV-TR Diagnoses

All participants had a primary DSM-IV-TR SUD diagnosis. They were opioid dependence (n=7; 38.9%), cocaine dependence (n=6; 33.3%), alcohol dependence (n=2; 11.1%), and n=1 each for amphetamine dependence, cannabis dependence, and cannabis abuse. Most (n=11; 61.1%) also had a co-occurring DSM-IV-TR mental health diagnosis: mood disorder (n=6), panic disorder (n=1), and not otherwise specified (n=4).

Primary Substance

Primary substance ("drug of choice") was as follows: crack (n=5; 27.8%); cocaine, heroin, codeine, marijuana (each n=2, 11.1% each); other opiate (n=4; 22.2%); and benzodiazepines (n=1; 5.6%). For route of administration for the primary substance, the breakdown was smoking (n=7; 38.9%); oral (n=6; 33.3%); injection (n=4; 22.2%); and inhalation (n=1; 5.6%).

The majority (n=11; 61.1%) also used a second substance: cocaine (n=4); alcohol, marijuana (n=2 each); and crack, opiate, benzodiazepine (n=1 each). For the second substance, route of administration was smoking (n=4); oral; inhalation (n=3 each); and injection (n=1). Some also used a third substance (n=5; 27.8%), which was marijuana (n=2); alcohol, benzodiazepine, and oxycodone (n=1 each).

Adverse Events

No adverse events occurred. Moreover, during the six months of the study, no participant left the group during the session, was asked to leave, nor needed extra intervention after the group. No participant dominated the discussion in a lengthy way such that the "five-minute" sharing limit had to be enforced. However, one guide struggled with responding to participants' comments; she tended to give long feedback that often did not relate to the original comment made by the participant. This was addressed by the co-guide and staff person in post-session reviews as part of the adherence focus.

Outcomes

For quantitative outcome results, see Table 1. All tests across time were significant, and effect sizes were large except for the Basis-32, which was medium.

Treatment-Related Measures

The mean on the Client Satisfaction Questionnaire was 3.90 (SD=.10, n=9) at the end of treatment, indicating strong satisfaction on the 1-4 scale.

The SS End of Session Questionnaire also had positive results. On the 0-3 scale, the mean across all 25 topics for helpfulness for PTSD was 2.73 (SD=.53, n=15) and the mean across all 25 topics for helpfulness for SUD was 2.41 (SD=.56, n=14). For the mean of all eight items on the scale, the range was 2.27 to 3.00.

The SS Adherence Scale-Brief Version had a mean of 2.63 (sd=.27) across all 35 ratings (range from 1.88 to 3.00), indicating strong adherence.

Qualitative Data

From the focus group interviews, the following feedback was obtained.

Thoughts on attending a peer-led SS group? "Reinforces one addict helping another addict," "Empowering for peers," "Encourages those who don't share," "More personal," "Don't feel judged," "Feel understood," "Need to have respect for one another," "Need to respect each other and leaders." "Peer guided made me feel comfortable." "I liked all of the info covered. Very informal. It helped me to make my own decisions to change areas of my life and thinking." Another woman wrote, "I love the fact that you can relate with everyone, including the guide." "I learned to trust and bond with women."

What do you like about SS? "Informative," "Express feelings," "Goal oriented," "Identify feelings," "Self-awareness," "Positive coping," "Behavior modification techniques," "Commitment," "Encouraging," "PTSD info," "Public accountability," "Processing tools," "Applicable to daily life." They also stated that the most helpful elements of the treatment were the focus on ideals; coping skills; interpersonal skills; quotations; the poster and handout of safe coping skills; the core concepts of treatment; and the length of the treatment.

What SS aspects do you dislike? "Long check-in," "Short check-out." "I did not care for counselors to sit in on every session." "The audio taping of the sessions."

What changes would you like to see to peer-led SS? Respondents unanimously reported that peer SS should remain as it was in this study; modifications were not proposed. When asked about the number of sessions, nearly all the respondents indicated the number of sessions should remain the same.

How was peer SS different from regular treatment? When asked about how peer SS was different from the residential program, the women thought that peer SS was more personal and drew them closer to peers in the group. The women reported the peer group experience, both as guides or participants, as one of their best treatment experiences and wished that more clients could be involved. The use of peers in the study was selected as a strongly positive influence by 77.8% of respondents and as a moderately positive influence by 22.2%, making it the most positive influence on the study, followed by the influence of the Seeking Safety manual.

TABLE 1
Outcome Results[1]

Scale	Baseline Mean (sd)	Month 1 Mean (sd)	Month 2 Mean (sd)	Month 3 Mean (sd)	Month 4 Mean (sd)	End of Treatment Mean (sd)	Across Time F (df), p	Effect Size Eta squared[4] or Cohen's d[5]
Trauma Symptom Checklist-40[2]								
Mean	.83 (.33)	.68 (.33)	.64 (.41)	.42 (.36)	.52 (.44)	.25 (.25)	5.95 (5, 44.80) .004	.14 large[4]
Basis-32[2]								
Mean	.75 (.57)	.42 (.46)	.65 (.40)	.28 (.29)	.36 (.42)		7.36 (4, 33.16) .000	.11 medium[4]
Impulsive/addictive behavior subscale	.56 (.70)	.25 (.31)	.28 (.36)	.13 (.25)	.24 (.32)		3.58 (4, 32.78) .016	.17 large[4]
Brief Symptom Inventory[2]								
Global severity index	.86 (.64)					.25 (.31)	40.40 (1, 8.25), .000	4.49 large[5]
Positive symptom distress index	1.83 (.64)					1.17 (.26)	19.24 (1, 12.66), 001	2.47 large[5]
SS Coping Scale[3]								
Mean	3.43 (.76)					3.96 (.65)	7.00 (1, 9.59), .025	1.67 large[5]
Self-Compassion Scale[3]								
Mean	3.23 (.99)					3.91 (.68)	7.07 (1, 10.37), .023	1.68 large[5]

1. Blank spaces indicate the scale was not administered at that timepoint.
2. Higher score indicates more impairment.
3. Higher score indicates less impairment.
4. Effect size is eta-squared, used for more than two timepoints.
5. Effect size is Cohen's d for two timepoints.

Experience of being a peer guide. Some guides expressed initial fears that they would not be accepted as leaders, but this was not borne out. The participants conveyed that peer SS was the best group they were attending and that they felt respect and closeness towards the guides. Additionally, many non-participants were interested in the group and sought out the guides for information; they were recognized as being helpful for trauma and other issues. During sessions, the guides supported recipients' self-efficacy when possible, using phrases such as: "Really good connection." "Thank you for sharing that; I know how difficult it must have been." "You all did a great job with the topic; thank you for the courage that you showed tonight."

Sustainability. Peer SS has continued since the study completed. One of the study staff trained in SS continued the process. New women were admitted every six weeks and, at each six-week point, a participant volunteered to guide the next six sessions. Co-guides were not used after the study was over. Staff reported that the group appeared to work well and have a very positive influence. Indeed, during the study, staff were so positive about the program that they wanted to increase the number of participants in the program, but were reminded that study parameters did not allow for adding additional women beyond the study plan.

DISCUSSION

This study attempted a novel public health intervention: use of an evidence-based model, Seeking Safety (SS), in peer-led format. This is the first study we know of to attempt a peer-led recovery group focused on both substance abuse and trauma-related problems. Peer models have long been a mainstay of addiction recovery through 12-step groups such as Alcoholics Anonymous, but have not been widespread for trauma-related problems.

SS was not modified for peer-led use in our study, but instead several implementation parameters were developed to help make the model accessible for this modality. It was tested within a residential substance abuse treatment program with 18 women, of whom seven served as guides (each for one month) in addition to being participants.

Our results were consistently positive. All five outcome measures in the study were significant, indicating improvements in trauma-related problems, functioning, psychopathology, coping skills, and self-compassion. Effect sizes indicated substantial change over time (four variables had large effect sizes; one had a medium effect size). There was no measure of substance use as all participants were in residential substance abuse treatment (and a positive report would have meant removal from the program). However the Basis-32 *impulsive-addictive behavior* subscale improved significantly over time. Attendance, adherence, and treatment satisfaction were also all strong. Also notable was the absence of adverse events, which is particularly important for a peer-led model.

There was clear enthusiasm for peer-SS, according to the staff of the residential program. Participants reported excitement about peer-SS. They stated that they looked forward to attending group, viewed group as a commitment, and reported feeling supported and empowered by it. Some initial concerns of the peer guides were allayed (they were not sure how they would be viewed as leaders), and there was just one guide who struggled with the model (responding with discursive and overly long comments to participants). Staff of the residential program stated that they too had positive views of peer-SS and chose to continue it, even after the study ended.

This project indicates that the professional SS treatment manual can be successfully implemented by peers. In general, the history of peer-led treatments is a grass-roots approach in which people who have felt disenfranchised or mistreated by professionals have formed their own peer-led methods and models (White 2009). Here, in contrast, we have taken an existing professional model and implemented it with peers, largely "as-is," with a few added parameters to aid its use in peer-led format.

This is the first study we know of to attempt a peer-led recovery group focused on both substance abuse and trauma-related problems. Peer models have long been a mainstay of addiction recovery through 12-step groups such as Alcoholics Anonymous, but have not been widespread for trauma-related problems. SS appears to lend itself well to peer trauma work because it is an approach that is highly stabilizing, structured, optimistic, coping skills oriented, educational, and present-centered. These features reduce the potential for "triggering" of participants that are associated with telling or listening to trauma narratives. The features also provide a focused approach that can keep the work on track, while retaining an empowerment perspective.

The study has limitations, however. The small sample limits generalizability and statistical power. There was no control condition, given the pilot nature of the project. Also, some of our methods were appropriate for a first-ever evaluation of peer-SS but may not be needed or feasible in future peer-SS, such as having a staff member sit in silently on all sessions and rate adherence. Modification of such methods may be an important next step, such as having a co-guide rate adherence to preserve fidelity to the model.

As this was a first study in a new topic area, we did not have a theory to organize a targeted set of measures. We selected measures that had relevance to the concepts in SS and that we believed might show change based on prior studies of clinician-led SS. Results suggest that peers attained a range of positive outcomes. Whether SUD would change, however, is unclear due to the residential nature of the setting. We could speculate that SUD may be less likely to change than other domains measured in this study. SUD is a disorder marked by minimization and denial; a peer-led approach may lack the sophisticated skills of expert

clinicians to "get beyond defenses." SUD, especially its more severe forms, appears harder to change than trauma-related problems (Najavits & Hien 2013). Alternatively, we note that paraprofessionals in the addiction field (albeit not peers) have been found equal or sometimes better than professionals in their outcomes (Najavits & Weiss 1994). Thus, peers with SUD may be effective in helping others with SUD, which is, in essence, the finding of AA and other 12-step groups.

Many future directions could be suggested based on results from this project. It would be useful to try peer-SS in outpatient or community-based settings similar to the conduct of 12-step groups such as Alcoholics Anonymous and Survivors of Incest Anonymous. Experimentation with different methodologies for conducting peer-SS would also be beneficial. For example, testing the model with single versus co-guides, differing numbers of participants, men (as this study included solely women), various types of training, and open group format are all relevant areas to explore. Studying the cost of professional versus peer-led SS in relation to outcomes would also be a key area. In sum, peer models for trauma and comorbid trauma and addiction are a new development, with more work needed for continued clinical and research development.

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