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Seeking Safety Group Therapy for Co-Occurring Substance Use Disorder and PTSD among Transgender Women Living with HIV: A Pilot Study

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ABSTRACT

Transgender women living with HIV experience high rates of substance use, violence, and post-traumatic stress disorder (PTSD). Seeking Safety is a manualized, present-focused, cognitive-behavioral therapy program designed to address co-occurring substance use and PTSD. Seeking Safety has evidence of efficacy in a variety of populations but had not been evaluated specifically with people living with HIV or transgender women. We pilot-tested a 12-session Seeking Safety program with a group of transgender women living with HIV who reported substance use and a history of violence. Seven transgender women living with HIV were recruited from two HIV primary care clinics in San Francisco and completed pre- and post-intervention assessments. Participants attended an average of 8 of the 12 sessions. Mean scores for all three outcome measures improved: PTSD symptom scores declined 17.5%, alcoholism screening scores declined 23.9%, and drug abuse screening scores declined 68.8%, on average. Despite the small sample, this pilot study showed Seeking Safety to be a promising intervention among transgender women living with HIV. The findings are encouraging and justify larger studies of Seeking Safety among transgender women and other people living with HIV who experience high rates of substance use and PTSD.

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Over the last three decades, women have borne an increasing burden of the HIV epidemic in the United States. In 2012, 23% of people living with HIV in the U.S. were women and, in 2014, women accounted for 25% of new AIDS diagnoses (Centers for Disease Control and Prevention 2016b), more than triple the proportion in the mid-1980s (Centers for Disease Control and Prevention 2001). Of these newly diagnosed women, over three quarters were African American or Hispanic/Latina (Centers for Disease Control and Prevention 2016b), showing the disproportionate impact of HIV on communities of color. Transgender communities are also severely affected by HIV. A systematic review of research on transgender individuals documented an HIV prevalence rate of 27.7% among male-to-female transgender women (Herbst et al. 2008), and disproportionately high rates of HIV among African American transgender women, 56% of whom tested positive for the disease.

Many women living with HIV have also experienced trauma during their lives. The U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) defines trauma as "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or threatening and that has lasting adverse effects" (Substance Abuse and Mental Health Services Administration 2014). Traumatic events include childhood and adult physical, sexual, and emotional abuse; neglect; loss; community violence; and/or structural violence like racism, sexism, and homophobia, among others. Many individuals with HIV experience multiple and/or prolonged occurrences of trauma over time, defined as "complex trauma" (Cloitre et al. 2011).

A growing body of literature strongly suggests that the prevalence of trauma exposure and post-traumatic stress disorder (PTSD) is significantly higher among individuals living with HIV compared to the general population. The results of a meta-analysis indicate that 55% of women living with HIV (WLHIV) have experienced intimate partner violence (IPV) in their lifetime, compared with 35.3% of women from a national survey of women (Machtinger et al. 2012b). Similarly, rates of recent PTSD in women living with HIV are five times

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greater than national rates (30.0% and 9.7%, respectively) (Machtinger et al. 2012b). Recent and past trauma are associated with a higher risk of being exposed to HIV (Jewkes et al. 2010; Maman et al. 2000), as well as with poor health outcomes for both men and women once they are living with HIV, including lower medication adherence, virologic failure, increased hospitalizations, and higher rates of mortality (Leserman et al. 2008, 2002; Mugavero et al. 2006, 2007, 2009; Pence et al. 2012; Weber et al. 2012). Transgender individuals also experience high rates of traumatic events, and resulting PTSD and depressive symptoms (Brown et al. 2011). In one study, transgender women living with HIV were found to have similar experiences of trauma to cisgender women living with HIV (Machtinger et al. 2012a).

Although fewer studies have addressed the intersection of trauma and HIV infection among transgender women, transgender women, in general, experience exceptionally high rates of trauma. A systematic review found that 58% of transgender women had experienced violence at home (Herbst et al. 2008). In another study among 113 transgender women, Kenagy (2005) found that 68.8% of participants had been forced to have sex, 67.3% had experienced violence in the home, and 65.3% had been physically abused. It is thus not surprising that transgender women have among the highest prevalence rates of HIV among any affected group in the U.S. While transgender women account for a relatively small portion of people living with HIV, the prevalence of HIV within this community is estimated to be as high as 28%, with significant racial disparities (56% among African American transgender women, 17% in White transgender women, and 16% in Hispanic transgender women) (Centers for Disease Control and Prevention 2016a).

Substance use is also common among individuals living with HIV, including among cis and transgender women (Clements-Nolle et al. 2001; Dawson Rose et al. 2016). Substance use disorder (SUD) is thought to be, in part, an adaptive but ultimately unhealthy response to high rates of trauma in this population (Machtinger et al. 2015). Among women, the high rates of co-occurring substance abuse, violence, and HIV/AIDS have led to the consideration of these conditions as a syndemic (Meyer, Springer, and Altice 2011). Substance use, like trauma, is associated with poor health outcomes among individuals living with HIV, including lower medication adherence (Gonzalez et al. 2013), opportunistic infections (Lucas et al. 2006), and high rates of overdose deaths (San Francisco Department of Public Health 2014). The syndemic nature of these conditions impacts the approach to care, as treatment for depression and/or SUD is more effective if co-occurring PTSD is concurrently or sequentially addressed (Nixon and Nearmy 2011; Torchalla et al. 2012).

Despite the high rate of co-occurring PTSD and SUD, and evidence that treatment is more effective if it addresses both conditions, few treatment programs have been developed to address both conditions simultaneously (Najavits and Hien 2013). Of these, Seeking Safety is the most widely studied (Najavits 2002). It is a manualized, present-focused, cognitive-behavioral therapy addressing co-occurring PTSD and SUD. Extensive research has shown positive effects of Seeking Safety on PTSD symptoms and substance use disorder among a variety of populations, including incarcerated women (Zlotnick, Johnson, and Najavits 2009), adolescent girls (Najavits, Gallop, and Weiss 2006), and women in community treatments (Gatz et al. 2007). A recent randomized controlled trial showed improvements in both PTSD symptoms and SUD severity among participants in a Seeking Safety program (Hien et al. 2015). Although Seeking Safety has been evaluated in a variety of populations and clinical settings, it has never been tested among individuals living with HIV or among transgender women. The goals of this study are to evaluate the acceptability of Seeking Safety in a group of transgender women living with HIV, and to assess the treatment's impact on PTSD symptoms and substance use.

Methods

Participants

The Seeking Safety program described here was carried out as part of an existing harm-reduction program for women living with HIV at two clinical sites in San Francisco: the Women's HIV Program at UCSF (WHP) and Ward 86 at the Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG). The primary purpose of the harm-reduction program was to reduce HIV transmission to HIV-negative partners ("prevention with positives") by empowering women living with HIV through individual and group support.

The Seeking Safety program was initiated specifically for transgender women patients at the two sites. Transgender women were approached by members of the clinical team and invited to participate. In order to meet inclusion criteria, participants had to be a transgender woman living with HIV, have a history of trauma, and active or prior substance use who were enrolled in clinical care at one of the previously mentioned clinical sites. Eleven women completed the initial assessment. Of these, one did not meet eligibility

criteria; one was interested in the intake incentives but not the therapy; one did not follow up after the baseline assessment; and one dropped out after the first Seeking Safety session for unknown reasons. Seven transgender women completed the Seeking Safety program. All participants were transgender women living with HIV with a self-reported history of past or ongoing traumatic experiences and substance use. No formal diagnoses were necessary for inclusion in the clinical intervention. Active psychosis served as the only exclusion criteria, and no one was excluded.

IRB approval was obtained from the UCSF Committee on Human Research after completion of the intervention for evaluation of Seeking Safety as a clinical program, using de-identified data.

Seeking Safety treatment

Seeking Safety is a manualized, flexible, cognitive-behavioral therapy program addressing co-occurring PTSD and substance use (Najavits 2002). The therapy addresses four primary content areas: cognitive, behavioral, interpersonal, and case management; it is broken down into 25 potential sessions. The number, length, and order of the sessions can be tailored to the nature and resources of the participant population and setting. Each session follows a structured format with a limited set of pre-approved materials; facilitators may choose which materials to incorporate into each session but cannot alter the content. The sessions can be carried out in groups or individually.

The Seeking Safety intervention was led by a licensed clinical social worker (LCSW, co-author KD) and a Master's prepared social worker (MSW). The LCSW had training in implementing Seeking Safety, and had previously directed a program of Seeking Safety and individual therapy for trauma survivors who were actively using substances. The MSW had experience working with transgender clients living with HIV.

As implemented here, Seeking Safety consisted of 12 two-hour group sessions held weekly. The two facilitators, along with a physician (author EM) with experience in trauma-informed primary care and care of individuals living with HIV, selected the modules. The team selected 12 of the 25 Seeking Safety modules for their relevance and appropriateness for transgender women living with HIV. Attention was paid to include an even distribution of cognitive, behavioral, and interpersonal content areas; the case management domain was excluded because participants were independently case managed through WHP or ZSFG. Prior to conducting each module, the two facilitators reviewed the handouts to decide on focus areas for the session. Selected modules included: "PTSD: Taking Back Your Power," "Detaching from Emotional Pain: Grounding," "When Substances Control You," "Taking Good Care of Yourself," "Compassion," "Honesty," "Integrating the Split Self," "Commitment," "Setting Boundaries in Relationships," "Respecting Your Time," "Healthy Relationships," and "Healing from Anger."

Participants were incentivized in a graded fashion according to the number of sessions attended ($20 for the initial assessment; plus $180 for completion of all 12 sessions, $160 for completion of 9–11 sessions, $120 for completion of 6–8 sessions, or $20 per session for completion of <6 sessions). Follow-up assessments with all participants were conducted individually within approximately two weeks of the last session at the convenience of the participant and were required for receipt of compensation.

Measures

The two facilitators administered assessment surveys pre- and approximately two weeks post-treatment. The assessments included demographic information and the following instruments:

The PTSD CheckList-Civilian Version (PCL-C; Weathers et al. 1993) is a validated 17-item tool shown to be valid, reliable, and concordant with clinician-administered diagnostic assessments in a range of populations (Adkins et al. 2008; Beckerman and Auerbach 2011; Blanchard et al. 1996; Dobie et al. 2002; Grubaugh et al. 2007; Israelski et al. 2007; Kimerling et al. 1999; Mueser et al. 2001). This measure maps to DSM criteria for PTSD and yields both a continuous symptom score (range 17–85), and dichotomous diagnoses (cut-off score of 45).

The Short Version Michigan Alcohol Screening Test (MAST-22; (Selzer, Vinokur, and Van Rooijen 1975)) consists of 22 yes/no items that are summed to screen for alcoholism. Scores of 0–3 suggest "no apparent problem"; a score of 4 suggests "early or middle problem drinker"; and scores of 5 or more suggest "problem drinker" or alcoholism.

The Drug Abuse Screening Test (DAST-20; (Gavin, Ross, and Skinner 1989; Skinner 1982)) is a 20-item yes/no instrument used to screen for drug abuse and addiction, and has proven validity and reliability (Yudko, Lozhkina, and Fouts 2007). Responses are summed to calculate a total score (range 0–20; 0 = no drug abuse; 1–5 = low; 6–10 = intermediate; 11–15 = substantial; and 16–20 = severe). A score of six or above likely meets DSM criteria for drug abuse.

Participants completed simple written evaluations and provided verbal feedback following each session. Approximately five months after completion of the intervention, the facilitators invited participants to a follow-up meeting to discuss the effect of the intervention on their lives, and what they had liked or disliked about the intervention. Two individuals participated, and they received an additional $20 to thank them for their time.

The facilitators took field notes after each session to document what worked best and any difficulties. This information was supplemented by three one-hour post-intervention interviews with the two treatment facilitators several months after the conclusion of therapy. The purpose of these interviews was to complete documentation about the procedures and materials used, and to identify successes and obstacles encountered with the sessions, materials, or other aspects of administering the therapy to transgender women living with HIV.

Data analysis

Participant characteristics from the baseline assessment were analyzed using frequencies. Treatment outcomes were defined as pre- to post-treatment changes in PTSD symptom severity and substance use. These outcomes were analyzed using mean percent change and paired *t*-tests. Diagnostic criteria for PTSD and presumed diagnoses of substance use disorders were assessed using PCL-C and the MAST/DAST, respectively, and were reported descriptively. All data analysis was completed using SPSS.

Results

Participants (N = 7) were all female-identified transgender women, predominantly African American (71.4%) with a mean age of 42.3 years (SD = 10.1), and all were receiving government-provided health insurance (Table 1). The majority reported taking highly active antiretroviral therapy (HAART) (85.7%). On average, participants attended eight of the 12 Seeking Safety sessions, with six participants (85.7%) completing seven or more sessions.

All seven participants decreased in PCL-C score, indicating improvement in PTSD symptoms (Table 2). The mean score dropped 9.7 points, from 55.4 pre-intervention to 45.7 post-intervention, representing a 17.5% decrease (p = 0.05). Four women met diagnostic criteria for PTSD post-treatment compared to five pre-treatment.

Mean MAST scores for alcohol abuse declined 1.7 points from 7.1 pre-intervention to 5.4 post-intervention, representing a 23.9% decrease (p = 0.11). Scores decreased in five participants and increased in two. Four participants had presumed diagnoses of a drinking problem pre- and post-intervention.

Table 1. Participant characteristics (N = 7).

	Number (%)
Gender	
Trans Female (MTF)	7 (100.0%)
Age (mean)	42.37 (SD 10.1); range 32–61
Ethnicity	
African American/Black	5 (71.4%)
Caucasian/White	2 (28.6%)
Monthly Income	
< $500	1 (14.3%)
$500—$1,000	5 (71.4%)
$1,001—$2,000	1 (14.3%)
Housing Status	
Home/Apartment	4 (57.1%)
Friend/Family Member/Partner	1 (14.3%)
Residential Program	1 (14.3%)
Shelter	1 (14.3%)
Health Insurance	
Government-provided	7 (100.0)%
Antiretroviral Therapy	
On HAART	6 (85.7%)
Self-reported adherence < 90%	2 (28.6%)
Substance use (last three months)	
Any substance use	6 (85.7%)
Crack/cocaine, heroin, or methamphetamine	2 (28.6%)
Other (e.g., marijuana, alcohol)	6 (85.7%)
IV drug use	0 (0.0%)

The mean DAST score for drug abuse dropped 4.4 points from 6.4 pre-treatment to 2.0 post treatment, indicating a 68.9% decrease (p = 0.06). Scores declined for four participants and remained unchanged in three participants. Four participants had presumed diagnoses of a drug problem post-intervention (low, intermediate, substantial, or severe) compared to five pre-intervention.

Post-intervention discussions with the Seeking Safety participants and group facilitators also yielded important qualitative information about the implementation of the program:

Number and length of sessions

Group facilitators felt that the 12 Seeking Safety modules, delivered in 12 two-hour weekly sessions, provided a solid treatment foundation within a time frame that was pre-agreed upon by participants.

Session structure

The first 15 minutes of each session were devoted to food and socializing, followed by 15 minutes for a structured Seeking Safety "check-in" about important events in participants' lives. The bulk of each session was contained in the middle hour with 30 minutes left for commitments and evaluations. Facilitators indicated

Table 2. Change in outcome scores, by patient ($N = 7$).

	PCL-C (range 17–85)		MAST (range 0–22)		DAST (range 0–20)	
Patient	Pre	Post	Pre	Post	Pre	Post
1	64	58	9	10	1	1
2	35	32	3	1	5	3
3	32	25	3	2	0	0
4	70	66	15	13	0	0
5	68	36	3	4	12	2
6	59	57	12	6	18	8
7	60	46	5	2	9	0
Mean (SD)	**55.4 (15.5)**	**45.7 (15.3)**	**7.1 (4.9)**	**5.4 (4.5)**	**6.4 (6.9)**	**2.0 (2.9)**
% Change		−17.50%		−23.90%		−68.80%

that, with this participant population, the consistent session structure was critical to treatment success.

Module selection

"Grounding" was the most useful module, in that it taught effective, concrete coping skills. The modules "PTSD Taking Back Your Power" and "When Substances Control You" were essential to therapy goals. "Setting Boundaries" was helpful in negotiating safer sex practices. If done earlier in the course of treatment, the "Commitment" module could be useful in identifying and addressing barriers to attendance and retention in the therapy itself. Of note, the "Honesty" module was problematic and overly simplistic in this population because the disclosure of gender and HIV status can conflict with promoting personal safety in transgender individuals living with HIV. It must be recognized that Seeking Safety in no way promotes disclosure or honesty in relationships when there is a risk of resulting harm. However, the importance of honesty in relationships can be fundamentally problematic for the population that this intervention sought to address. As such, this module, in particular, must be conducted by experienced facilitators with the skills and awareness to help women choose whether they would like to safely and voluntarily disclose their gender identity and HIV status.

Session content

Given the group's low literacy level, facilitators found Seeking Safety's flexibility with respect to specific content inclusion to be particularly helpful. For example, reducing the number of handouts and promoting group participation through activities such as role-play improved the quality of each session. Handouts not discussed during a session were distributed later for participants' independent use, and facilitators noted that the density of information contained in each handout was overwhelming to many participants.

Incentives

Both the participants and facilitators identified incentives as the most important factor in promoting attendance and retention. Participants posed two suggestions for increasing attendance: staggering voucher distribution throughout the course of treatment rather than providing compensation at the end, and providing transportation vouchers.

Session evaluations

Low literacy levels decreased the effectiveness of the standard Seeking Safety written evaluations. Group facilitators found that keeping ongoing notes on problematic or effective content areas was particularly helpful. The facilitators informally sought verbal feedback from participants about the modules as implementation progressed. In the future, verbal feedback in the form of more structured one-on-one exit interviews or comprehensive focus group discussions may provide important information.

Follow-up support groups

Participants found the social support and solidarity aspect of group meetings just as important to therapy as directly addressing PTSD and substance use. The all-transgender composition of the group was essential in providing a safe atmosphere and was more important than HIV status. Suggestions were made for follow-up support groups, such as a transgender-specific career-oriented group inspired by the content of the "Respecting Your Time" module.

Discussion

To the authors' knowledge, this is the first study to assess a Seeking Safety intervention for co-occurring substance use and PTSD in a group of transgender women living with HIV. It is also a study of primarily low-income African American women, an important population for the study of PTSD and substance use issues. Further, it is one of many studies to demonstrate positive findings with a 12-session intervention (Hien et al. 2015). The study demonstrated positive trends in key outcome measures. Among the seven participants, mean PTSD symptoms, alcohol use, and drug use scores all declined from pre- to post-intervention. These pilot results indicate that a 12-session course of Seeking Safety (as opposed to the full 25-session course) may reduce PTSD symptoms and alcohol and drug use among transgender women living with HIV. Larger studies are needed and now warranted to assess the long-term impact of Seeking Safety and to fully explore its potential benefits in transgender women living with HIV.

The study has a number of limitations that require it to be interpreted as a pilot study. Many of these limitations were inherent to a study that evaluated an existing clinical program. These limitations include a small sample size, lack of a control group, and lack of long-term follow-up data. Furthermore, the MAST and DAST assess both current and lifetime substance use and were not adjusted post-treatment to account for this. It should also be noted that two of the seven participants reported no drug use prior to the intervention, which lowers the ability to detect drug use outcomes and likely underestimates the effect of the intervention overall. As a result, post-treatment scores are likely to underrepresent the degree of improvement with intervention. Drug and alcohol use was assessed based on the previously noted self-report measures with no objective data obtained over the course of treatment (e.g., urine toxicology). The Seeking Safety sessions were not audio/video recorded, which potentially introduces facilitator recall bias. All participant assessments were self-administered but conducted in the presence of treatment facilitators, which may have biased participant responses towards an overestimation of impact size. Finally, low literacy levels in this patient population may have impacted the validity of the various assessment instruments.

Findings from this study are encouraging and justify larger studies of Seeking Safety among transgender women and other individuals living with HIV who experience high rates and negative consequences of PTSD and substance use disorder. As the impact of trauma on health is increasingly recognized, it is crucial to build an evidence base and practical experience with interventions that can help patients more effectively cope with and heal from the impacts of trauma and prevent re-victimization.

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