

Acceptance-based, intersectional stigma coping intervention for people with HIV who inject drugs: an RCT in St. Petersburg, Russia

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Background

People with HIV who inject drugs experience multiple, intersecting forms of stigma which adversely impact care utilization needed to ending the HIV epidemic.

AIMS

To compare the effects of a **behavioral stigma coping intervention** in this population on:

- 1) Changes in HIV and substance use stigma scores at 1 month (primary outcomes)
- 2) Self-reported ART initiation, engagement in substance use care (outpatient, inpatient, or 12-step program), and change in total number of injections in previous 30 days (secondary outcomes, at 6 months)

Methods¹

Study Design

- 2-arm randomized (2:1) controlled trial, n=100
- **Key Inclusion criteria:** 1) HIV-positive (recruitment site regularly conducts rapid HIV tests, and referred those with positive results); 2) current injection drug use (IDU), past 30 days; 3) not currently on ART or in substance use treatment; 4) at least 18 years old; 5) available on the days of the intervention sessions
- **Exclusion criteria:** 1) not fluent in Russian; 2) cognitively impaired resulting in ability to provide consent; 3) acute severe psychiatric illness (recent history or assessor assessment); 4) enrolled in another research study
- Face to face interviews at baseline, 1 & 6 months (during pandemic, follow-up interviews occurred over phone)

Recruitment

- 100 participants recruited between September 2019 and October 2020 from a harm reduction NGO in St. Petersburg, Russia

Randomization

- Intervention (n=67) or control (n=33)

Control

- Received usual care from the NGO (i.e., sterile injection equipment, opioid overdose reversal medications, referral to HIV & addiction services, information on safer sex)

Intervention

- Usual care from NGO plus intervention
- Adapted from previously used Acceptance and Commitment Therapy (ACT) manual developed by Luoma et al.²
- Participants received three weekly 2-hour group sessions (3-8 participants) each delivered by two psychologists
 - ACT is a cognitive-behavioral therapy to help participants respond more effectively to experienced, internalized, and anticipated manifestations of shame and stigma
- Sessions include group activities, instructive components, and homework assignments

Statistical Analyses

- Linear regressions and linear probability models with robust standard errors to estimate the effect of the intervention on continuous and binary outcomes, respectively
- Primary outcomes adjusted for baseline stigma scores, injection frequency, history of ART, and depressive symptoms
- Secondary outcomes unadjusted except for injection frequency adjusted for baseline score

Results

- Almost all participants (98%) completed the 1-month assessment and 95% completed the 6-month assessment.

Table 1. Baseline characteristics of participants in the SCRIPT study

| | Total N=100 | Intervention N=67 | Control N=33 |
|---|----------------|----------------------|-----------------|
| Age in years, mean (SD) | 38.1 (5.4) | 38.3 (4.9) | 37.7 (6.4) |
| Male, n (%) | 51 (51%) | 34 (51%) | 17 (52%) |
| History of any criminal arrests, n (%) | 94 (94%) | 62 (93%) | 32 (97%) |
| HIV internalized stigma ^a , mean (SD) | 3.4 (1.7) | 3.3 (1.8) | 3.52 (1.6) |
| Substance use stigma ^b , mean (SD) | 31.8 (7.3) | 31.4 (7.3) | 32.5 (7.4) |
| Ever on ART, n (%) | 39 (39%) | 30 (45%) | 9 (27%) |
| Substance use care utilization, n (%) | 13 (13%) | 10 (15%) | 3 (9%) |
| Moderate/severe depressive symptoms – PHQ-9 ^c , n (%) | 36 (36%) | 25 (37%) | 11 (33%) |
| Moderate/severe anxiety symptoms – GAD-7 ^d , n (%) | 16 (16%) | 10 (15%) | 6 (18%) |
| IDU frequency in the past 30 days (number of injections), mean (SD) | 18.6 (14.2) | 18.8 (15.2) | 18.2 (12.1) |

^a Simbayi scale (based on Kalichman).³ 0 (low) to 7 (high) internalized HIV stigma

^b Substance Abuse Self-Stigma Scale.⁴ 12 (low) to 60 (high) substance use stigma

^c PHQ-9: Patient Health Questionnaire-9

^d GAD-7: Generalized Anxiety Disorder-7

THIS STIGMA COPING INTERVENTION INCREASED ART INITIATION AND ENGAGEMENT WITH SUBSTANCE USE CARE, AND DECREASED INJECTION DRUG USE

Table 2. Primary outcomes at 1 month

| | Intervention N=66 | Control N = 32 | Adjusted estimate ^e [95% CI], p |
|--|----------------------|-------------------|---|
| Change in substance use stigma score from baseline, mean (SD)* | -1.42 (7.14) | 0.06 (7.81) | -2.18 [-4.87; 0.52], p=0.112 |
| Change in HIV stigma score from baseline, mean (SD)* | 0.45 (1.42) | -0.06 (1.05) | 0.40 [-0.14; 0.93], p=0.141 |

^e Estimate is a mean difference for numeric outcomes and risk difference for categorical outcomes.

Confidence intervals and p-values for the estimates were derived based on robust standard errors

*Change was calculated as a follow up estimate minus baseline estimate. Negative score represents a decrease in the outcome while positive score indicates an increase in the outcome at the follow up

Table 3. Secondary outcomes at 6 months

| | Intervention N=64 | Control N = 31 | Unadjusted estimate [95% CI], p | Adjusted estimate [95% CI], p |
|--|----------------------|-------------------|------------------------------------|---------------------------------|
| Change in IDU frequency from baseline, mean (SD) ^{f*} | -1.78 (14.60) | 7.16 (22.34) | - | -8.58 [-17.15; -0.01], p=0.0497 |
| ART initiation, n (%) | 13 (20%) | 1 (3%) | 0.17 [0.05; 0.29], p=0.005 | - |
| Engagement in substance use care, n (%) | 15 (23%) | 2 (6%) | 0.17 [0.03; 0.31], p=0.017 | - |

^f The outcome was measured among participants reported injecting drug use at 6 months (62 intervention and 30 control participants)

*Change was calculated as a follow up estimate minus baseline estimate. Negative score represents a decrease in the outcome while positive score indicates an increase in the outcome at the follow up

Limitations

- Small sample size and low statistical power
- All self-reported outcomes (no confirmation in medical records)

Conclusions

- This relatively brief stigma-coping intervention did not change how stigma manifests in people with HIV and current substance use
- The intervention reduced stigma's impact as a care barrier, improved HIV and substance use care, and decreased IDU
- This project established connections with harm reduction NGO
- Future iterations may consider the following:
 - Staff from the NGO as interventionists
 - ACT combined with case management or other type of 1 on 1 peer navigation
 - Increased emphasis during training on stigma and trauma
 - Longer follow-up period to measure ART retention
 - Viral suppression and retention as outcomes
 - Increased length of intervention
 - Incorporate measurements of shame

References

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