

Feasibility, Acceptability, and Efficacy of an Expressive Writing Intervention to Address Substance Use and HIV Risk Behavior Among HIV-negative Young Men Who Have Sex with Men

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Background

- Men who have sex with men (MSM) are disproportionately affected by HIV.
- Substance use is associated with sexual risk behavior among MSM (Vosburgh et al., 2012).
- Concurrent substance use and sexual behavior is associated with HIV and STI transmission (Carey et al., 2009; Koblin et al., 2006).
- Expressive writing has demonstrated feasibility, acceptability, and efficacy in addressing psychological health (Clyman & Pachankis, 2013; Frisina, Borod, & Lepore, 2004) and behavior (Francis & Pennebaker, 1992; Mosher et al., 2011), including substance use (Carrico et al., 2014).
- As such, this pilot study utilizes expressive writing to address substance use and sexual risk behavior among HIV-negative young men who have sex with men (YMSM).

Methods: Express Yourself!

- Between 2014-2015, the project enrolled 78 HIV-negative YMSM (ages 18-29) in New York City who reported ≥ 1 day of substance use (cocaine, methamphetamine, MDMA, or heroin) and ≥ 1 condomless anal sex act with a casual partner in the past 60 days.
- Participants completed a baseline Qualtrics survey assessing psychological and psychosexual health and substance abuse (CIDI & AUDIT)
- Participants completed a Timeline Follow Back assessment of sexual behavior and substance use
 - # of partners, # of anal sex acts, # of condomless anal sex acts, # of anal sex acts UI, # of condomless anal sex acts UI, # of drug use days, # of heavy drinking days (5+ standard drinks)
- Participants were then randomized to an expressive writing (EW) or control writing condition ($n = 39$ in each group). Participants wrote for three 15-minute increments, separated by 10-minute breaks.
 - EW participants wrote about their sexual behavior and substance use.
 - Control participants wrote about their day, per standard control condition instructions.
- All completed the PANAS immediately post-writing.
- Seventy-seven participants completed two-month follow-up assessments, involving a Qualtrics survey, TLFB, and writing evaluation.

Sample Characteristics

- M Age: 25.23 ($SD=2.21$)
- 51% White
- 60% have at least a four-year degree
- Total 60-day partners: 8.27 (6.86), 1-37; Med: 6
- Total anal sex acts: 10.96 (10.16), 1-45; Med: 7
- Total condomless anal sex acts: 6.19 (7.35), 1-34; Med: 3
- Total anal sex acts UI: 5.17 (5.80), 0-27; Med: 3
- Total condomless anal sex acts UI: 3.05 (4.4), 0-24; Med: 2
- Total heavy drinking days: 16.63 (13.19), 0-60; Med: 15
- Total drug use days: 6.54 (6.78), 0-38; Med: 4

- Independent samples t-tests indicated that, compared to YMSM in the control condition, those in the EW condition used significantly more affect words (5.8 vs. 3.6, $p < .001$) and cognitive processing words (21.2 vs. 17.1, $p < .001$).
- “Sometimes I feel that I may never be a happy person. I am quite comfortable with my sexuality but I sometimes feel like I am forced to be the way I am. There are times where I get disgusted in myself because of my sexuality and how I fulfill my sexual needs. ... I feel like my mother still doesn't accept me the way I am. I honestly couldn't give a crap but it does have an effect on me sometimes especially when I'm already feeling down and out of place. I wish there was a way I can find out why was I born the way I am. I sometimes feel out of place like I don't belong but looking on the brighter side I am overall happy with my life. ... I just want to be happy. I just want to be happy. I just want to be happy in life. I want to feel comfortable in my skin with my sexuality. ... I wish I could go back in time to the part where I first had feelings for a guy so I can ask myself what is wrong with me. I would be able to stop myself right then and there.” –Single, 21, Multiracial, Expressive Writing Condition
- “On a typical day I wake up before my alarm goes off then I go back to bed until my alarm does go off. I check my grindr, then my scruff. I then turn on my computer to check my email, and then use it to put on a pornographic film. I then masturbate to the film until I ejaculate. Afterwards, I go to the restroom to pee, brush my teeth, and shower. I then take my Pre-exposure prophylaxis.” –Single, 24, Latino, Control Condition

Results: Feasibility

Results: Acceptability

- 99% retention
- PANAS ratings indicated high positive affect ($M = 4.4$; 1.4-7) and low negative affect ($M = 2.1$; 1-6.1).
- Participants reported low difficulty of writing ($M = 2.4$; 1-7).
- Independent samples t-tests indicated that, compared to control, EW group evaluated the writing as significantly more valuable, that they shared more emotions, and that they wrote about previously undisclosed thoughts and emotions.
- “All in all I feel like writing out my feelings has been incredibly beneficial to me and has made me feel much better about where I am sexually and emotionally.” –Single, 25, Black

Results: Preliminary Efficacy

- Repeated measures t-tests indicate full sample and EW group reductions in AUDIT scores (12.0 to 10.2, Cohen's $d=.29$), CIDI scores (2.5 to 1.6, Cohen's $d=.46$), drug use days (6.5 to 5.4, Cohen's $d=.27$) and heavy drinking days (16.6 to 11.9, Cohen's $d=.58$) (Cohen's d 's .27-.58)
 - No condition differences in changes
- Repeated measures t-test indicated a significant reduction in depression (CESD) in the full sample (7.9 to 5.8, Cohen's $d=.36$)
- Repeated measures t-tests indicate full sample and EW group reductions in sexual compulsivity scores (Kalichman & Rompa, 1995; 20 to 17.9, Cohen's $d=.29$) and in temptation for condomless sex (35.4 to 32.6, Cohen's $d=.24$), and increases in sexual esteem (15.7 to 17.1, Cohen's $d=.25$).
 - Condition marginally predicted 2-mo temptation scores ($B = .16$, $p = .17$)
- Repeated measures t-tests indicate full sample and EW group reductions in total number of sexual partners (8.3 to 6.7, Cohen's $d=.38$), total condomless anal sex acts (6.2 to 5.1, Cohen's $d=.25$), total anal sex acts under the influence (5.2 to 4.1, Cohen's $d=.31$), and total condomless anal sex acts under the influence (3.3 to 2.0, Cohen's $d=.35$).
 - Condition marginally significant predictor of 2mo anal sex acts UI, $\text{Exp}(B) = .569$, $p = .117$

Conclusions

- The intervention was highly feasible.
- Expressive writing was evaluated positively.
- In the full sample and in the EW condition, there were several effects on substance use/abuse, sexual risk behavior, and their combination, plus effects on psychological and psychosexual factors.
- Few condition group differences, but all in the right direction when detected
- Next Steps
 - Linguistic analyses
 - Qualitative analyses
 - Efficacy trial

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