

# Results of a Brief, Peer-Led Intervention Pilot on Cognitive Escape Among African American Adults Living With HIV, Comorbid Serious Mental Illness, and a History of Adverse Childhood Experiences

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Adverse childhood experiences (ACEs), defined as the experience of abuse, neglect, and/or instability within the home before the age of 18 years, are consistently associated with a variety of adverse mental and physical health outcomes (Campbell et al., 2016; Felitti et al., 1998; Giovanelli et al., 2016). ACEs are commonly reported: in the seminal ACE study ( $N = 9,508$ ), more than half of respondents reported at least one adverse childhood experience, and more recent studies report a slightly higher prevalence, with 57% of participants reporting one or more ACEs on average (Felitti et al., 1998; Hughes et al., 2017). Further, ACE scores have a significant positive association with adult health risk behaviors and diseases, such that a higher number of ACEs has a significant positive association with several of the leading causes of death, including cardiovascular disease, cancer, and chronic respiratory illnesses (Bellis et al., 2015; Campbell et al., 2016). Additionally, ACEs are associated with substance abuse, HIV risk behavior, increased risk for serious mental illness (SMI), and suicidality (Fang et al., 2016; Hughes et al., 2017).

Understanding the effects of ACEs in marginalized groups is particularly important as literature regarding the prevalence of ACEs has consistently found that ACEs are not equally distributed throughout the population,

with African American and Latinx individuals experiencing a higher prevalence of ACEs than non-Hispanic White individuals (Slopen et al., 2016). Related, applying intersectionality theory to psychological research, Cole (2009) posits that individuals with numerous stigmatized identities sit at the intersection of multiple systems of discrimination and oppression (Cole, 2009; Crenshaw, 1993, 1994). For example, African Americans face significant health disparities compared with their White counterparts, and these disparities widen when comparing individuals with more privileged identities to those who hold multiple marginalized identities, such as being both African American and living with HIV (Earnshaw et al., 2015). African Americans living with HIV and another stigmatized health condition, for example, serious mental illness [SMI], may face three levels of stigma and oppression, with resultant negative effects on coping.

Other vulnerable populations, such as individuals living with HIV or SMI, also appear to be disproportionately affected by ACEs. Bekele et al. (2018) found that 71% of participants living with HIV reported at least one ACE, which indicates a notably higher prevalence than most studies of the general population (Bekele et al., 2018; Hughes et al., 2017). Although, to our knowledge, the exact prevalence of ACEs among individuals living with SMI has not been measured, the literature on the relationship between ACEs and poor mental health outcomes indicates that individuals living with SMI likely experience more ACEs on average than the general population (Hughes et al., 2017). Beyond the potential higher prevalence of ACEs among this group, it is important to examine the effects of ACEs on coping, particularly within a group experiencing three multiple, intersecting sources of stigmatization (Manyema et al., 2018). Both HIV and SMI are highly stigmatized conditions, and when they affect already disadvantaged

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groups, the stigma can increase barriers to treatment and jeopardize the well-being of those affected (Gaston et al., 2016; Lipira et al., 2019). Research has shown that individuals who experience multiple ACEs are less likely than those experiencing no or one ACEs to use problem-focused coping and are more likely to use avoidant emotion-focused coping styles (Sheffler et al., 2019). Although this style of coping may have been adaptive during childhood and early life, more broadly avoidant coping is associated with poorer physical and mental health and an increased reliance on alcohol use (Churakova et al., 2017; Sheffler et al., 2019).

Cognitive escape coping, specifically, may affect the health of individuals living with HIV and SMI (Du Bois & McKirnan, 2012). Cognitive escape models posit that when individuals consistently face situations that cause them psychological distress, they may choose to disengage from the source of distress via avoidant behavior, such as substance use and suppression of distressing thoughts (Nemeroff et al., 2008). It is believed that, due to the stigma and severity of an HIV diagnosis, individuals with HIV may engage in cognitive escape behavior in an attempt to alleviate the distressing cognitions associated with living with HIV (Du Bois & McKirnan, 2012; Nemeroff et al., 2008; Pérez et al., 2018). This avoidant-focused coping is associated with depressive symptoms, risky sexual behavior, and fatalistic beliefs (Nemeroff et al., 2008). Additionally, substance use as a form of cognitive escape may be particularly harmful due to its physical health consequences and its association with treatment nonadherence and sexual risk behavior among individuals living with HIV (Friedman, et al., 2015; Nemeroff et al., 2008). Although the cognitive escape model has not been applied directly to individuals living with SMI, research has indicated that internalized stigma can contribute to avoidant-focused coping, such as substance use and avoidance of distressing situations and cognitions (Schibalski et al., 2017; Wang et al., 2018).

The primary purpose of this study was to examine the effects of ACEs on maladaptive coping, both before and after a peer-led intervention, among African American individuals living with comorbid HIV and SMI. Evidence suggests that such peer-led interventions can help improve coping among African American individuals with HIV (Cabral et al., 2018). Given that ACEs are associated with avoidant coping generally, we hypothesize that a history of ACEs in this sample may relate positively to engaging in cognitive escape behavior (Manyema et al., 2018; Sheffler et al., 2019). Additionally, we hypothesize that participating in our peer-led, psychoeducational, community-based participatory

research (CBPR) intervention will mitigate this association among African American adults living with HIV and SMI.

## Methods

This is a secondary analysis of pilot data collected to assess initial outcomes of a CBPR-developed intervention. Procedures are briefly described here. For a thorough description of intervention development and pilot methods, please see Du Bois et al. (2020) and Guy et al. (2020), respectively. This study was approved by the Illinois Institute of Technology Institutional Review Board.

## Participants

Recruitment occurred in the Midwestern region of the United States. Participants were recruited via flyers posted and distributed in a local HIV clinic, clinic staff referrals, and participant word-of-mouth. Potential participants completed a brief Qualtrics (a web-based survey platform) screener online that was provided on the flyer using a QR code and website link. Research assistants were also present at the HIV clinic with internet-connected tablets to assist participants with the screener at the participants' preference. Participants meeting the following criteria were included in the study: (a) self-identified as African American; (b) lived within the local metropolitan area; (c) self-reported a seropositive diagnosis of HIV; (d) were 18 years of age or older; (e) understood and read English; (f) self-reported missing at least one of the following within the past year: a dose of any prescribed medication, medical appointment, or psychotherapy appointment; and (g) currently experiencing difficulties in at least two areas of functioning due to a serious mental health condition by self-report. Participants with multiple reported racial/ethnic identities were included if one of their reported identities was African American. Other demographic items assessed participants' sex, gender, sexual orientation, education, income, employment status, and self-reported SMI diagnoses. The CBPR team decided collaboratively to assess SMI via self-reported limitations in multiple areas of functioning (e.g., having trouble with going to work or school or living independently) due to a serious mental health condition, so that no potential participants would be excluded because they had not received an official SMI diagnosis. This approach and our broader criteria for this variable reflect similar criteria in a comparable study (Magidson et al., 2014). For a more detailed

description of how we assessed SMI, please see Du Bois et al. (2020) or Guy et al., (2020).

## Procedures

All participants reviewed and completed voluntary informed consent with a team member before study participation. Participants completed preintervention assessments 1 to 4 weeks before the first of four, weekly 90-minute, group-level intervention meetings. Post-intervention assessments were completed immediately after the last group-level intervention meeting (Prepare2Thrive; Du Bois et al., 2020; Guy et al., 2020). Thus, the time interval between preassessment and post-assessment ranged from 4 to 7 weeks in August through October of 2018. Questionnaires assessed several constructs relevant to the intervention targets (e.g., medication adherence, appointment attendance, HIV and SMI stigma, and coping) Participants were compensated \$20 for completing each survey and \$25 for attending each intervention session.

## Intervention

Each 90-minute group, led by two peers, covered topics resulting from the intervention development qualitative analysis described in Du Bois et al. (2020). All sessions were discussion and activity driven. Sessions 1 and 2 focused on stigma and discrimination. This included defining terms (i.e., HIV, SMI, and stigma), dispelling myths via a jeopardy game, and peer facilitators sharing personal experiences as they felt comfortable. Sessions 3 and 4 focused on communication with supports (e.g., family, friends, and health care providers), coping with difficult emotions, and using problem-solving skills to manage HIV care. An eclectic assortment of empirically supported intervention techniques was used to address these topics, including LifeSteps (Safren et al., 1999), DEAR MAN (Linehan, 2014), and Progressive Muscle Relaxation.

## Measures

**Adverse childhood experiences.** Adverse childhood experiences were measured using the Adverse Childhood Experiences Questionnaire from the ACE study (Felitti et al., 1998; Dube et al., 2003). The ACEs Questionnaire is a 10-item measure in which respondents indicate whether they have been exposed to various adverse events in childhood, including abuse (psychological, physical, sexual) and household dysfunction (substance abuse, mental illness, mother treated violently, and

criminal behavior in household). An example item from the psychological abuse category states, “Did a parent or other adult in the household often ... Swear at you, insult you, put you down, or humiliate you? Or act in a way that made you afraid that you might be physically hurt?” Respondents indicate “Yes” or “No” to each item. “Yes” is coded as “1” and added to create a total score. The measure has demonstrated adequate concurrent and predictive validity, as well as high test–retest reliability (Dube et al., 2004; Felitti et al., 1998). Internal consistency for the current study was adequate ( $\phi = .20$  to  $.70$ ). Notably, two items (i.e., “Was a household member depressed or mentally ill or did a household member attempt suicide?” and “Did a household member go to prison?”) were not correlated with physical abuse items ( $\phi = -.12$  to  $.00$ ).

**Substance use as cognitive escape.** Substance use as cognitive escape was measured using the *alcohol and drug use subscale* of the Cognitive Escape Scale, a measure of HIV-related cognitive avoidance (Nemeroff et al., 2008). This subscale consists of three items with the question stem, “How often do you” and items: “1. Use alcohol or drugs to forget about HIV/AIDS?,” “2. Get drunk or high to put HIV/AIDS out of your mind?,” “3. Go get wasted when the thought of HIV/AIDS comes to mind?” Respondents answer on a Likert-type scale (from 1 = *never* to 5 = *always*). This subscale has demonstrated adequate construct validity and internal consistency ( $\alpha = .83$ ), as well as concurrent validity with measures of depression and perceived stress (Nemeroff et al., 2008). Internal consistency for the current study was excellent (pre  $\alpha = .98$ , post  $\alpha = .92$ ).

Given the dearth of literature reporting measures for cognitive escape regarding SMI, the authors created items to measure substance use as cognitive escape in relation to SMI. The authors used all items of the Cognitive Escape Scale *alcohol and drug use subscale* and replaced “HIV” with “mental health condition” to measure this construct. Given that this measure was created for this study, no previously published psychometric data are available at this time. Internal consistency for the current study was excellent (pre  $\alpha = .96$ , post  $\alpha = .87$ ).

**Data analytic plan.** Eighteen participants provided data for this study. All participants provided data at preintervention, but two participants did not return for the remainder of the study. Data from these two participants were therefore excluded from postintervention analyses. Data were analyzed descriptively for sample characteristics and ACEs. ACEs was bimodally distributed in the current sample, thus the researchers chose to dichotomize this measure into two groups. Using ACEs

scores dichotomized into two groups (high  $\geq 3$ ; low  $\leq 3$ ), analysis of variance (ANOVA) was used to test the association of ACEs with HIV substance use as escape, and the association of ACEs with SMI substance use escape. ANOVAs were disaggregated by time (preintervention and postintervention); therefore, four total ANOVAs were conducted. Due to lack of statistical power to test an interaction effect, the authors chose to forgo using a repeated-measures ANOVA or controlling for covariates using analysis of covariance. An alpha value of .05 was selected to determine statistical significance. Exact *p* values for ANOVAs are reported in Table 3.

## Results

No significant group-level differences emerged between those who were excluded from the follow-up analyses

due to missing data ( $n = 2$ ) and those who provided both preintervention and postintervention data ( $n = 16$ ,  $p$ 's  $> .05$ ). Sample demographics for the 16 participants in the postintervention analyses appear in Table 1. All participants identified as African American/Black, with one participant identifying as both African American/Black and Puerto Rican. Most participants reported ( $n = 8$ , 62.5%) that they were gay or lesbian and identified as a cisgender male ( $n = 14$ , 77.8%). The mean age of participants was 46.83 years ( $SD = 11.00$ ). Related to mental health diagnoses, the most frequently endorsed condition was major depressive disorder ( $n = 5$ , 27.8%), followed by bipolar disorder ( $n = 4$ , 22.2%).

Table 2 reports frequencies of ACEs in our sample. Participants in our sample reported experiencing an average of more than four ACEs ( $M = 4.67$ ,  $SD = 2.95$ ), a number of adverse experiences that places them at

**Table 1. Intervention Participant Self-reported Demographics and Mental Health Diagnoses**

Variable	N (%)	Variable	N (%)
Gender identity		Mental health diagnoses	
Male	14 (77.8)	Major depressive disorder	5 (27.8)
Female	4 (22.2)	Bipolar disorder	4 (22.2)
Transsexual	1 (5.6)	Anxiety	3 (16.7)
Sexual orientation		PTSD	3 (16.7)
Heterosexual	6 (33.3)	Schizophrenia	2 (11.1)
Gay or lesbian	8 (44.4)	Schizoaffective disorder	1 (5.6)
Bisexual	3 (16.7)	Obsessive-compulsive disorder	1 (5.6)
Not sure/don't know	2 (11.1)	Panic disorder	1 (5.6)
Relationship status		Phobia	1 (5.6)
Single (never married)	16 (88.9)	Do not know	2 (11.1)
In a committed relationship	1 (5.6)	Ever hospitalized for mental health	8 (44.4)
Divorced	1 (5.6)	Religious preference	
Work status		Christian/protestant	6 (33.3)
On disability	10 (55.6)	Baptist	5 (27.8)
Not employed	4 (22.2)	None	5 (27.8)
Full-time employed	3 (16.7)	Roman Catholic	1 (5.6)
Part-time employed	1 (5.6)	Agnostic	1 (5.6)
Graduate student	1 (5.6)	Not religious, but spiritual	1 (5.6)

*Note.* Participants in most categories were able to "select all that apply," thus the sum of some categories are  $> 18$ . Please note participants were given several response options for gender identity and asked to select all that apply, including female, male, transgender, genderqueer/androgynous, transsexual, FTM, MTF, intersex, other (please specify). Options are shown for those identities that participants endorsed. FTM = female to male; MTF = male to female; PTSD = posttraumatic stress disorder.

**Table 2. Frequencies of Adverse Childhood Experiences Endorsed by Intervention Participants**

Category of Childhood Exposure Endorsed	N (%)	Total # ACEs Endorsed	N (%)
Abuse by category		0	1 (5.6)
Psychological	12 (66.7)	1	1 (5.6)
Physical	9 (50.0)	2	3 (16.7)
Sexual	8 (44.4)	3	4 (22.2)
Neglect by category		4	0 (0.0)
Emotional	11 (61.6)	5	2 (11.1)
Physical	5 (27.8)	6	1 (5.6)
Household dysfunction by category		7	1 (5.6)
Parental separation or divorce	10 (55.6)	8	4 (22.2)
Mother treated violently	8 (44.4)	9	0 (0.0)
Substance abuse	9 (50.0)	10	1 (5.6)
Mental illness	8 (44.4)	Participants $\leq 3$ ACEs	9 (50.0)
Criminal behavior in household	4 (22.2)	Participants $> 3$ ACEs	9 (50.0)

Note. ACEs = adverse childhood experiences.

significantly greater risk for negative health outcomes than those with less than four ACEs (Felitti et al., 1998; Hughes et al., 2017). The most commonly occurring adverse childhood experience among intervention participants was psychological abuse ( $n = 12$ , 66.7%), followed by emotional neglect ( $n = 11$ , 61.1%) and divorce—which is classified as household dysfunction ( $n = 10$ , 55.6%). Experiencing childhood physical abuse and living in a household with an individual who was a “problem drinker” or “used street drugs” were also frequently endorsed ( $n = 9$ , 50%).

Mean substance use as cognitive escape for SMI was higher at preintervention ( $M = 2.09$ ,  $SD = 1.40$ ) than it was at postintervention ( $M = 1.94$ ,  $SD = 1.07$ ). However, results from paired samples  $t$ -tests indicated that the mean differences between preintervention and postintervention scores were nonsignificant ( $p = .53$ ). For HIV, mean substance use as cognitive escape had a mean of 2.43 ( $SD = 1.45$ ) at preintervention and a mean of 2.44 at postintervention ( $SD = 1.43$ ). Thus, the change in scores from preintervention to postintervention was nominal, and, similar to substance use as cognitive escape for SMI, there were no significant mean differences between preintervention and postintervention scores ( $p = 1.00$ ). Finally, for those in the low ACEs group (scores  $\leq 3$ ), substance use as cognitive escape for both HIV and SMI marginally increased from preintervention to postintervention.

To assess for the impact of ACEs on substance use as cognitive escape, four one-way ANOVAs were conducted. At preintervention, there were significant mean differences between those in the low ACEs versus the high ACEs group on substance use as cognitive escape for both SMI  $F(1, 16) = .28$ ,  $p < .05$  and HIV  $F(1, 16) = 6.9$ ,  $p < .05$ . Individuals with three or more ACEs had greater substance use as HIV-related cognitive escape behavior ( $M = 3.22$ ,  $SD = 1.61$ ) than those with less than three ACEs ( $M = 1.63$ ,  $SD = .84$ ). The same was true for SMI-related escape behavior, with those in the high ACEs group ( $M = 2.81$ ,  $SD = 1.57$ ) reporting greater substance use as cognitive escape than those in the low ACEs group ( $M = 1.37$ ,  $SD = .75$ ). At postintervention, there were no significant differences between ACEs groups in escape-related substance use for HIV ( $p > .05$ ) or SMI ( $p > .05$ ).

## Discussion

Consistent with study hypotheses, our findings indicated that associations between ACEs and escape-related substance use among participants were significant preintervention but nonsignificant postintervention. Additionally, reductions in mean cognitive escape-related substance use for both HIV- and SMI-related stress were observed for the high ACEs group from preintervention

to postintervention. However, the observed mean differences were nonsignificant. Thus, postintervention effects were not found. Although the reduction of means for the high ACEs group suggests the presence of intervention effects, the lack of significance may be due to a small sample size and lack of statistical power.

Although our study was statistically underpowered, the findings that emerged suggest that our intervention may have helped to reduce the impact of ACE-related trauma on escape-related substance use for individuals who have experienced a high frequency of ACEs and who are living with both HIV and SMI. One potential explanation for this observed attenuation from preintervention to postintervention is the use of peer support throughout the intervention. There remain mixed data on the efficacy of peer-support interventions; however, existing data suggest that individuals who engage in substance use treatment that includes peer support experience better outcomes, including less relapse, than those who do not receive peer support (Tracy & Wallace, 2016). Similarly, although effects are somewhat mixed, a meta-analysis reports that peer support had a generally positive outcomes at the

intersection of homelessness and problem substance use (Miller et al., 2020). Peer support is now recommended as a component in behavioral and integrated health care settings (Gagne et al., 2018). A meta-analysis of peer-support interventions on empowerment, self-efficacy, and internalized stigma among individuals with mental health conditions suggested that peer-facilitated, time-limited group interventions can result in small but significant improvements in empowerment and self-efficacy compared with treatment as usual (Burke et al., 2019). However, the evidence was inconclusive for internalized stigma (Burke et al., 2019). Few to no data exist examining peer support for the intersection of HIV, SMI, and substance use as cognitive escape. Nonetheless, consistent with related extant literature, peer-support interventions may have small effect sizes, meaning larger samples are needed to detect intervention effects.

We observed marginal increases in substance use cognitive escape coping from preintervention to postintervention in participants with less than three ACEs. Although this difference was not statistically significant, it may be possible that for those with few ACEs,

**Table 3. Results of the ANOVAs Testing the Relation Between ACEs Group and Substance Use Escape by HIV and SMI at Preintervention and Postintervention**

	<i>M (SD)</i>	<i>SS</i>	<i>F</i>	<i>p-Value</i>	$\eta^2$
Preintervention					
HIV substance use escape		11.42	6.94 <sup>a</sup>	.018	.30
ACEs low	1.63 (.84)				
ACEs high	3.22 (1.61)				
SMI substance use escape		9.39	6.23 <sup>a</sup>	.024	.28
ACEs low	1.37 (.75)				
ACEs high	2.81 (1.56)				
Postintervention					
HIV substance use escape		3.67	1.91	.189	.12
ACEs low	1.96 (1.22)				
ACEs high	2.92 (1.54)				
SMI substance use escape		.34	.28	.603	.02
ACEs low	1.79 (1.13)				
ACEs high	2.08 (1.07)				

Note. Between *df* = 1, within *df* = 16 at preintervention, and *df* = 15 at postintervention. ACEs = adverse childhood experiences; ANOVA = analysis of variance; SMI = serious mental illness.

<sup>a</sup>*p* < .05.

processing and coping with these experiences may not be at the forefront of their mind. For those with more than three ACEs, however, the processing and coping of these experiences may be more ever-present due to the difficulty in avoiding these experiences completely. For those in the low ACEs group, the intervention itself may have facilitated self-reflection on these experiences—something that may have been relatively new for these individuals compared with those with more ACEs who already self-reflect on these—which related to increased substance use as cognitive escape coping among those with fewer ACEs. Intervention interaction effects of number of ACEs and peer support may be an under-researched, yet important, component to interventions designed for historically marginalized populations.

### ***Clinical Implications***

Our study has implications for clinicians who work with African American individuals living with HIV and SMI, especially those with a history of childhood trauma. Individuals sitting at the intersection of multiple sources of oppression, such as African American adults living with HIV and SMI, who can experience racism and stigma related to HIV and SMI diagnoses, may be at higher risk for alcohol and substance use because the discrimination they experience likely creates psychosocial conditions, leading to higher risk of problematic use. This is consistent with previous research examining trauma and substance use among African American adult samples. Cross et al. (2015) found that in a sample of low-income, African American men and women, childhood trauma had a direct effect on current problematic alcohol use and substance use, and post-traumatic stress disorder had a significant indirect effect on these associations. Another study by Ducci et al. (2009) further illuminates that intersectional systems of oppression, not African ancestry in itself, are associated with psychosocial conditions in which childhood trauma may be more likely; these conditions (e.g., living in impoverished neighborhoods), subsequently, are what relate to substance use disorders in adulthood (Ducci et al., 2009).

Although this point may seem self-evident, we encourage health providers working with patients with multiple health concerns to consider the social determinants of health their patients may be experiencing, including childhood trauma, and the positions patients hold in society based on their multiple identities. Our study highlights that patients with multiple health concerns may benefit from providers considering intersectionality during treatment (e.g., by implementing peer-support interventions and using the ACEs

Questionnaire at intake). The ACEs Questionnaire is an accessible and clinically useful tool that can be used in health care settings to identify risk factors for adverse health outcomes and escape-related substance use. Health care providers should screen for ACEs and could then refer individuals with higher ACEs scores to additional support, such as peer-support groups or mental health treatment. Based on our results, interventions that focus on peer support, such as Prepare2Thrive, may be a useful referral option for health care providers because these types of interventions may help those with a high number of ACEs reduce the association of ACEs with treatment-interfering behaviors like escape-related substance use. However, more research is needed to demonstrate the effectiveness of implementing such an intervention in health care settings.

### ***Strengths and Limitations***

A notable strength of our study is the inclusion of a population that is frequently underrepresented in research and that experiences the intersection of racism, stigma due to HIV status, and stigma due to mental illness. The continuing shadow of the Tuskegee Syphilis Study, among other examples of historical maltreatment of African American people by researchers and medical professionals, can engender distrust from African American individuals (Boulware et al., 2003; Ben et al., 2017) and this may contribute to the underrepresentation of African American adults in HIV research (Du Bois et al., 2012; George et al., 2014; Johnston & Heitzeg, 2015). It is important that our study used a community-based approach to examine ACEs and cognitive escape among African American adults living with HIV and SMI and fills a gap in the current literature.

Our study is not without limitations. First, because there are no existing measures of cognitive escape for SMI to our knowledge, this study used a novel—instead of an established—measure. Our use of the original ACEs measure (Felitti et al., 1998) also serves as a limitation because we did not include measures of other known ACEs, such as housing instability, peer victimization, or socioeconomic status. Extant empiricism suggests that the addition of these experiences in ACEs measurement tools may improve the prediction of poor mental and physical health outcomes (Finkelhor et al., 2015). We also did not include measures of resilience, which would have helped to identify positive strengths within our study population that might be useful in creating health behavior change and informing interventions. Next, our sample included only 18 individuals,

which increases the likelihood of type II error and decreases the statistical power of the study. Due to this low power, we were unable to perform a more robust analysis controlling for time. Instead we relied on two separate analyses: preintervention and postintervention. Additionally, the length of the intervention may not have been long enough to observe significant changes in escape-related substance use. Future research on this topic and replication of study findings are necessary, with the aim to recruit larger sample sizes and utilize longitudinal designs, employ strengths-based approaches to research and measurement, and use validated and more comprehensive measures of study variables, such as ACEs and cognitive escape.

## Conclusion

Our study was one of the first to examine ACEs and substance use as escape in a sample of African American individuals living with HIV and SMI. More than four ACEs were common in the sample, a general risk factor for poor physical and mental health outcomes. At pre-intervention, a higher number of ACEs was associated with substance use as a means of disengaging or escaping from both HIV and SMI-related stress. However, after participating in our brief, peer-led intervention, these associations became nonsignificant. Therefore, although no intervention can decrease the number of ACEs someone experiences, our brief, CBPR-developed, peer-led intervention warrants further examination to test its ability to reduce associations between ACEs and ineffective coping behaviors.

## Disclosures

The authors report no real or perceived vested interests related to this article that could be construed as a conflict of interest.

## Author Contributions

All authors, H. Woodward, S. N. Du Bois, T. Tully, S. Fraine, and A. Guy, contributed substantively to the manuscript. All authors assisted with study design and interpretation of study findings, drafting of multiple sections of the manuscript, and final review of the manuscript. Each author has ensured the accuracy and integrity of the research presented.

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## Key Considerations

- African American adults living with comorbid HIV and SMI experience increased exposure to ACEs.
- Among this population, ACEs are associated with potentially treatment interfering behaviors, like cognitive escape-related substance use.
- Peer-led interventions may be effective in attenuating the association between ACEs and maladaptive coping strategies, and health care providers should consider these intervention types when referring clients to additional resources.

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### Results of a Brief, Peer-Led Intervention Pilot on Cognitive Escape Among African American Adults Living With HIV, Comorbid Serious Mental Illness, and a History of Adverse Childhood Experiences

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