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Learning to address multiple syndemics for people living with HIV through client perspectives on CBT

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Abstract

The mental health burden among people living with HIV/AIDS (PLWHA) is high and often involves multiple comorbid psychological and substance use-related psychosocial problems. These co-occurring problems, or syndemics, additively impair engagement in HIV disease management. Existing psychotherapies for mental health and HIV health have generally focused on a single psychosocial problem and little research exists to guide future psychotherapies that address multiple mental health issues. To address this gap in understanding, we conducted qualitative interviews with multiply comorbid PLWHA (*N*=30) who completed cognitive-behavioral therapy (CBT) for depression and medication adherence. Themes emerged regarding participants' perspectives on how overlapping substance use and mood disorders interacted to reduce the benefit of CBT. Substance use was a dominant theme compared to other syndemics, highlighting the need for integrated mental health and substance use interventions. Interviews also suggested modifications of which psychosocial concerns participants felt should be prioritized in treatment delivery. Finally, participants described content they would want in a psychotherapy intervention, including intimacy and sexual health. Future psychotherapeutic interventions for syndemic problems and HIV self-care will need to comprehensively address complex concerns, including issues salient to the overall well-being of PLWHA. This may improve client engagement and, ultimately, mental and physical health outcomes.

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Existing research has consistently documented a high mental health burden among people living with HIV/AIDS (PLWHA) (Bing et al., 2001; O'Cleirigh et al., 2015). For example, PLWHA evidence a higher prevalence of mood and anxiety disorders, as well as alcohol and substance use disorders compared to their HIV-negative counterparts (Bing et al., 2001; Ciesla & Roberts, 2001). PLWHA also appear to be at greater risk than HIV-negative individuals for violent victimization in adulthood (e.g., intimate partner violence; IPV), as well as having a greater likelihood of reporting abuse in childhood (Greenwood et al., 2002; Welles et al., 2009). These numerous psychosocial concerns (i.e., depression, alcohol and substance use disorders, and lifetime exposure to violence) have linked to poorer HIV-related health, including poorer adherence to highly active antiretroviral therapy (HAART) (Tucker et al. 2008) and faster biological disease progression (Lesserman, 2008; Pence, 2011). Finally, a growing body of research has demonstrated that these psychosocial concerns are highly comorbid and that greater comorbidity increases risk for poor health outcomes relative to those with fewer mental health problems, such as higher levels of condomless sex, poorer medication adherence, and increased HIV viral load (Blashill et al., 2015; Mizuno et al., 2015). This literature has termed these interacting psychosocial comorbidities as syndemics. Accordingly, PLWHA are at greater risk for poorer mental health, suffer worse HIV-health outcomes as a result, and appear to be burdened by a complex interaction of multiple psychological problems.

Because of the multiple psychological challenges faced by PLWHA, several cognitive-behavioral oriented psychotherapy interventions have been developed to address psychological health and HIV-related health simultaneously (Parsons, Golub, Rosof, & Holder, 2007; Parsons, Rosof, Punzalan, & Maria, 2005; Safren et al., 2009; Safren et al., 2012; Sikkema et al., 2009). For example, Safren and colleagues have examined cognitive-behavioral therapy for depression and HAART adherence in several trials (Safren et al., 2009; Safren et al., 2012; Safren, Bedoya, O'Cleirigh, Biello…& Mayer, 2016). Parsons and colleagues have also developed a psychotherapy integrating motivational interviewing for address problematic alcohol use with counseling for HIV medication adherence (Parsons, Golub, Rosof, & Holder, 2007; Parsons, Rosof, Punzalan, & Maria, 2005). Others have developed interventions to treat trauma symptoms among HIV-positive adults and have demonstrated that the psychotherapy improves both mental health (Sikkema et al., 2007) and HIV transmission risk behavior (Sikkema et al., 2008).

In some cases, these psychotherapy effects are not sustained post intervention when individuals are also using substances (e.g., Parsons, Golub, Rosof, & Holder, 2007; Safren et al., 2012). In one trial of cognitive-behavioral therapy for HIV medication adherence and depression (CBT-AD) in individuals in treatment for injection drug use (PWIDU) with clinical depression and one trial of a cognitive behavioral intervention for adherence and alcohol abuse, intervention effects were demonstrated at post-treatment, but by long term

follow-up, treatment gains had declined on some of the outcomes (Parsons, Golub, Rosof, & Holder, 2007; Safren et al., 2012). However, in studies of the CBT intervention for HIV medication adherence and depression in HIV care, that did not specifically recruit substance users, improvements in adherence and mental health were generally maintained over follow up (Safren et al., 2009, Safren et al., 2016). Although dissipation of benefits following psychotherapy is not uncommon, one alternative cause for this dissipation in treatment response is the additional substance use comorbidity for trial participants, above and beyond other mental health concerns. Comorbid mental health issues that remain unaddressed in a psychotherapy intervention designed for a single mental health problem could limit how well the benefits of treatment can persist over time.

Mental health-focused psychotherapies for PLWHA may now be entering the next wave of innovation and development. First, the field came to acknowledge the empirical evidence proving the influence mental health has on disease-related outcomes for PLWHA. Second, interventions were developed to simultaneously address mental health symptoms and HIV health. Now, psychotherapy researchers are investigating factors that contribute to poor treatment response in these interventions, namely the influence of multiple mental health comorbidities prevalent among PLWHA. Although researchers and clinicians can draw on existing literature with other populations on treating multiple psychological conditions in tandem (e.g., McEvoy, Nathan, & Norton, 2009; Pachankis, Hatzenbeuhler, Rendina, Safren, & Parsons, 2015; Wilamowska et al., 2010), none of this literature specifically applies to those living with HIV who also manage challenges to their physical health. Because of the high level of complexity of psychological disorders among those living with HIV, unified psychotherapy interventions will likely need to be similarly complex to address overlapping conditions. Incorporating health behavior change into the treatment of mental health problems, such as improving HIV medication adherence, adds another treatment goal for these potential intervention to address. Therefore, more research is needed to help inform the design of these interventions.

Unfortunately, little empirical guidance exists to move psychotherapy development in this area forward and existing discussions have been primarily theoretical (e.g., Safren et al., 2015). Qualitative research, however, can be an appropriate method for hypothesis generation in this manner because it relies on the personal experiences of a population of interest (e.g., Mack, Woodsong, MacQueen, Gues, & Namey, 2005). Interventions designed with the perspectives of PLWHA in mind will also be more likely to reach and retain clients in treatment, which can be particularly useful considering the barriers these patients face in accessing treatment (e.g., stigma, exposure to violence, financial limitations, etc.).

The current study used in-depth individual qualitative interviews with PLWHA with clinical depression that had recently completed a cognitive-behavioral therapy for depression and ART medication adherence (Safren et al., 2016), and had at least one additional comorbid condition besides depression. The primary goals of the current study were to gain insight from PLWHA on how mental health comorbidities might interfere with learning cognitive-behavioral principles in psychotherapy, and to elicit their opinions on novel content and structure for future interventions. By addressing these principal questions, the current study intended to provide early, informative guidance for intervention development in mental

health and HIV disease management that more comprehensively addresses the complex interplay of these problems.

Method

Procedure

Participants were recruited from a trial of cognitive-behavioral therapy for depression and ART medication adherence [Safren et al., 2016]. All participants in the current qualitative study were offered up to 12 sessions of cognitive-behavioral therapy focused on medication adherence and the treatment of depression. Components of the intervention designed to address symptoms of depression included behavioral activation, cognitive-restructuring, problem-solving training, and relaxation techniques. Additional details on the procedures and administration of the psychotherapy trial are reported elsewhere (Safren et al., 2016; Newcomb et al., 2015).

The parent study was a multi-site randomized controlled trial at three HIV clinics in southern New England. Approximately one-third of the total sample was recruited from each of the trial sites for the current study to ensure the current study sample was balanced across all sites. All participants in the current study provided written informed consent with a study staff member. The Institutional Review Board at Massachusetts General Hospital reviewed and approved all study procedures as the parent Institutional Review Board for participating sites.

A staff research assistant identified participants from the parent study. To be eligible, participants had to meet all criteria for the parent study, which were: a) be 18 years of age or older; b) be living with HIV, c) have been prescribed HAART for at least 2 months, and d) have either a current diagnosis of depression or been prescribed an anti-depressant medication for a depression diagnosis and have at least some residual depressive symptoms. For the current study, additional inclusion criteria included the completion of the CBT-based arm of the randomized controlled trial (RCT) and having met criteria for at least two syndemic conditions at the baseline assessment of the RCT. These were defined as: adult violence (as identified by a single self-report item from the Stressful Life Events Checklist for DSM-IV-TR; Gray, Litz, Hus, & Lombardo, 2004), childhood sexual abuse (i.e., sexual intercourse with an older adult occurring in childhood or adolescence, as self-reported in standardized questions from previous literature; Paul, Catania, Pollack, & Stall, 2001), a diagnosable drug or alcohol use disorder (diagnosed by a doctoral-level clinical psychologist with the Mini International Neuropsychiatric Interview for DSM-IV (MINI); Sheehan et al., 1998). Participants in the primary trial, and therefore this study, were excluded for the following conditions: active, untreated, unstable, major mental illness (i.e., untreated psychosis or mania) that would interfere with study participation, any primary psychotic disorder, or a history of either CBT or intensive intervention for medication adherence in the past year. The research assistant contacted eligible participants either in person or over the phone and invited them to participate in a qualitative interview.

Doctoral-level clinicians, with training and experience in qualitative interviewing, conducted the qualitative interviews. Participants were invited to the study offices of the site where they

participated in the intervention trial. At one site, a post-baccalaureate research assistant conducted interviews due to staffing limitations (i.e., to prevent having a participant's study therapist be their qualitative interviewer). The research assistant received training in qualitative interviewing by the site's study clinical psychologist/research team member. The principal investigator supervised all study staff conducting qualitative interviewers. Interviews were semi-structured to ensure important topics were covered, but allowed for interviewers to probe for additional detail as appropriate. The principal investigator held regular meetings with qualitative interviewers to discuss findings from interviews and determine, as a group, what themes were emerging in interviews. Through these meetings, the principal investigator, in consultation with other researchers with experience in qualitative methods, determined when saturation occurred (i.e., when no new themes emerged from the interviews being conducted).

Participants engaged in interviews until saturation occurred. Saturation was achieved when it was determined that there were no new emergent themes or data and no new codes resulting from the interviews. Participants were paid $50 for completing the interview. Data for the qualitative study were collected from 2011 to 2012.

Participants

Of the 30 participants who completed individual interviews for the study, 35.5% were women and 65.5% were men. In terms of sexual orientation, 70% of men identified as gay or bisexual, and 30% of men identified as heterosexual. All women identified as heterosexual. The average age of participants was 48.97 years (SD=8.33). Participants self-reported their racial identity and 54.8% of participants identified as White, 41.9% identified as African-American or Black, 3.3% identified as multiracial. The majority of participants identified as not Hispanic or Latino (93.5%), while 6.5% of participants identified their ethnicity as Hispanic or Latino. There was a range of educational background, with 51.6% of participants reported having completed at least some college education, 32.3% of participants reported having earned a high school diploma, and 16.2% of participants reported not completing high school. The majority of participants reported either not working or being on disability (73.2%).

The prevalence of commonly comorbid mental health conditions among clients was high; due to the parent study criteria, all participants met criteria for major depression (Safren et al., 2016). In the current study, 50% reported having experienced childhood sexual abuse, with 40% of all participants reporting having experienced violence in childhood and 10% reporting having experienced recent violence in the past six months. Nine (30%) of participants met criteria for PTSD Additionally, 33.3% of participants met criteria for a current substance use disorder or one in early remission, while 13.3% met diagnostic criteria for a current alcohol use disorder or one in early remission.

Measures

A semi-structured interview guide, developed consistent with guidelines by Huberman and Miles (2002), was used to collect qualitative data. The interview guide was developed by the principal investigator, in consultation with other clinical psychologists with expertise in

qualitative methods. The interview questions were based on emerging literature identifying syndemic mental health problems as contributors to poor HIV health, as well as expert opinion. The interview guide was piloted with a participant (whose data was not coded in the current study) to assess its clarity and content, and revised to included questions on distinct topics that emerged from the pilot interview. The subsequent open-ended questions explored the following topics: experience of therapy in study, motivations to enter therapy, acceptability of therapy (aspects that were helpful and unhelpful), barriers to attending therapy, potential structural changes to the therapy (adding content, adjusting length), sexual health, and substance use. Questions were open-ended to minimize the risk of biasing participants' responses and to allow for the emergence of novel themes.

Qualitative Analysis

The qualitative interviews were audio-taped and later transcribed by a professional transcription service. Research assistants checked the accuracy of transcribed interviews. During this process, research assistants also insured that no editing of participants' responses had occurred during transcription. Content analyses were conducted using NVivo 10 software to uncover themes related to HIV, syndemics, and treatment feedback (NVivo; Strauss & Corbin, 1998). This entailed an iterative multi-step process using the techniques described by Miles and Huberman (1984). The research team took several steps throughout the iterative coding process to increase the rigor of analyses. First, coding was performed by the first and second authors based on the first three interviews to structure data into categories and to create groups with the use of the qualitative guide. This was done by the first and second authors. Themes were then reexamined in consultation with the third author and last author. At this step, major and minor themes within each content area were identified.

The first and second authors then both proceeded to code the first three interviews using the developed coding scheme. Afterwards, they met with the third and senior authors to resolve any discrepancies, refine any specific codes that were confusing or unclear, and add any additional needed codes. The research team then repeated this process with seven more interviews and met to discuss discrepancies. Any codes that were determined to be confusing or unclear were revised and any redundant codes were removed. Coders discussed discrepancies from these first two stages of coding until a resolution was reached. The coders then each independently coded the remaining 10 interviews and afterwards met to discuss results with other authors. An audit trail of discussion among team members regarding the qualitative coding process was maintained and referred to when resolving discrepancies for reliability purposes. The research team (NSP, JER, CP, SAS) discussed findings to insure the interpretation of the data was not being influenced by preconceived theories.

The coders (first and second author) were a female bachelor's level research assistant and a male master's-level graduate student in clinical psychology (respectively), both with experience in HIV research. The third author (female) and last author (male), who have experience in qualitative methods, supervised the coders throughout the coding process. Expert review of the qualitative process was provided by the third author, and expert review

of HIV and treatment-related content was provided by the senior and third author, both of whom are doctoral-level clinical psychologists with notable expertise in HIV and mental health research.

Results

Data from individual interviews were distilled into themes related to clients' perceptions of interconnections among their syndemic stressors, the effects of multiple psychological comorbidities on therapy,other barriers to the psychotherapy intervention, and suggested directions for future interventions. These themes were organized by the qualitative coding scheme and main findings, with supporting quotes, are presented below.

Perceived Connections between Mental Health Comorbidities and HIV Health

Many participants identified how their comorbid psychological diagnoses (e.g., depression and substance use disorder) were separate, but related, components of their overall mental health. Participants identified causal links between their different psychological problems and were aware of how these conditions influenced one another. For example, participants would highlight how low mood or anxiety would lead to coping emotionally with alcohol or drug use to avoid negative feelings.

> They're very related because a person usually uses substances because they want to forget or they want to - they don't want to feel what's going on...You know they just want to block it out.
>
> 57 year old, Black, male (depression, childhood sexual abuse, drug use disorder)
>
> They break that circle, like the programmed type of feeling like I'm used to doing it this way, I'm used to getting high, getting high, getting high and I get high because of this, this, and this. So I would have to find something to take that away.
>
> 57 year old, White Hispanic male (depression, PTSD)

Further, interactions between negative mood, substance use as a coping strategy, and poor HIV care were clear. Some participants identified multiple ways that their syndemic stressors interacted to interfere with optimal HIV self-care. For most of these participants, these psychosocial problems would overwhelm their ability to care for their health.

> If I get depressed…If I'm drinking and I'm high…I don't end up taking that medicine because I'd rather pick up a drink first.

41 year old, White female (depression, PTSD, substance use disorder, alcohol use disorder, childhood sexual abuse)

In some cases, these stressors may have also contributed to structural barriers to fully engaging in HIV care. One participant described her homelessness as an illustrative example of this:

> *It* [substance use] *keeps people from dealing with mental illness at all. I know when I was homeless and in the streets and using drugs, there was no way that I was like,*

interested in - I mean, when you're high, you don't think about your pills. You don't remember.

62 year old, Native American female (depression, childhood sexual abuse, PTSD)

Benefit of Cognitive-Behavioral Therapy for Syndemic Conditions

Although the cognitive behavioral trial participants completed was principally focused on depressive symptoms and medication adherence, some participants articulated ways in which the strategies they learned applied to other psychological conditions. For example, some participants described using cognitive-behavioral approaches, such as behavioral activation or problem-solving therapy, to avoid engaging in substance use, even though that application of those strategies was not a targeted component of the intervention.

Give me a list of pros and cons for…using any type of marijuana, cocaine, heroin… and then we'll talk about it according to what they're listing…sometimes when you do that I think, you know…a person can really see.

57 year old, Black male (depression, childhood sexual abuse)

Referencing Problem-Solving Therapy

You know, because then, if you're doing something cheerful and enjoyable, you're not going to think about drugs or the alcohol, because you're already on a real high, you know?

50 year old, White male (depression, substance use disorder)

Referencing Behavioral Activation

Syndemic Interference with Cognitive-Behavioral Strategies

In spite of some innovative applications of cognitive-behavioral approaches to other conditions (e.g., substance and alcohol use), many participants also identified ways in which their comorbid psychological conditions were direct barriers to their success in cognitive-behavioral therapy for a single syndemic condition (i.e., depression).

Outwardly it would delay me doing my exercises, whatever exercises were homework. Inwardly, it would make me almost feel...hypocritical, because of my lack of ability to focus on what we was really talking about, you know?

60 year old, Black male (depression, alcohol use disorder, substance use disorder, childhood sexual abuse)

The majority of participants described substance or alcohol use as most directly reducing the benefits of cognitive-behavioral treatment for depression. For example, although research clinicians and staff agreed to the study policy that a session would be rescheduled if a participant presented under the influence of drugs or alcohol, there were some participants who engaged in the study while under the influence, unbeknownst to staff. Participating in the clinical sessions while under the influence was an emergent theme for some participants that reduced the potential for learning during session, as illustrated by the following quote,

> Hour's a long time…especially if I come in high and all I'm focusing is on getting high it's, like, 'oh I want to be out of here.'
>
> 51 year old, Black male (depression, PTSD, substance use disorder)

Distraction by urges to use alcohol or drugs was also a theme articulated by these same participants, particularly when describing the emotionally challenging work in session of directly addressing depressive symptoms. This echoed earlier themes describing interconnections between using alcohol or drugs to cope with negative mood, as exemplified by this quote,

> Because I…needed a drink. And by the time I got out of here, the first thing I did was go to get a drink, to calm my nerves, which is terrible. And a pack of cigarettes. Let's be honest.
>
> 41 year old, White female (depression, PTSD, substance use disorder, alcohol use disorder, childhood sexual abuse)

Recommendations for New Syndemic Interventions for HIV Health

Unaddressed topics.—Some participants even explicitly identified comorbid psychosocial stressors that were not included in the current intervention, such as substance use or exposure to violence, as critical areas to help HIV-positive people address. For example, participants noted,

> *All of what I was going through, I had these problems. And my mental health issues and my disease and the drinking and drugging. Takes a little more than that 12 sessions*.
>
> 47 year old, White male (depression, substance use disorder, childhood sexual abuse)

Participants identified a range of topics they felt would be helpful to additionally address in an intervention for PLWHA focused on mental health and medication adherence (see Table 1 for major themes and illustrative quotes). Some of the most frequently mentioned topics were psychological disorders besides depression (as noted above in relation to substance use specifically) and personal relationships. One participant described how she continued to experience symptoms of PTSD, which were exacerbated when she was in the study due to an abusive romantic partner: "*So he was doing things to me and was kicking off memories, 'cause I have a background of severe sexual abuse. So things started kicking up."* She then described how she felt after she had completed CBT for depression, but was still experiencing symptoms of PTSD: "*I'm thinking about other people in this study that don't have that* [support]. *What did they do when it was over? I felt like I was just, you know, left out in the cold"* (42 year old Black female (depression, PTSD, childhood sexual abuse)).

Participants also described components of HIV care that they thought should be included in the intervention, such as the personal meaning of HIV and taking HIV medication, and health education topics (e.g., transmission of HIV, nutrition). Participants often discussed the impact of their mental health and their HIV on their close relationships with family and friends. As one participant noted,

> You don't want to tell people [about HIV or depression] because you don't want to feel like something's wrong with you. And, in my family, I'm the only one diagnosed…I thought they would think I wasn't whole or something.
>
> 62 year old, Native American female (depression, childhood sexual abuse, PTSD)

Participants also identified other social stressors (e.g., spirituality, minority stress) as impacting their self-care. Although reported histories of trauma were common (63% of participants met diagnostic criteria for PTSD or endorsed experiencing childhood sexual abuse), relatively few (n=3) participants directly mentioned trauma as a personally important topic they felt the current intervention did not fully address.

Potential modifications to existing intervention.—Participants were also generally open to discussing sexual health alongside discussions of mental health and medication adherence. Predominantly, clients suggested that discussing the impact of HIV on personal relationships and intimacy in therapy would be especially valuable for them. Another participant described the challenges of establishing intimacy when managing a sexually transmissible illness,

> It's hard for a person that is HIV-positive…and you're in love with somebody and you really care about them, it's hard for you to have sex because you feel like you might hurt them…And it makes you feel dirty.
>
> 55 year old, White female (depression, childhood sexual abuse)

Participants identified a number of sexual health-relevant topics they thought would be useful to cover, including the importance of condom use, as exemplified by this one quote from a participant,

> How important it is to have safe sex, you know; how important it is to have safe sex and to be mindful of safe sex
>
> 57 year old, Black gay male (depression, childhood sexual abuse).

Additionally, all participants acknowledged the importance of serostatus disclosure, but also the emotional challenges of navigating disclosure with sexual partners.

> A lot of people…tell me that I shouldn't tell people that I'm positive, but I do because I want to find out if he truly likes me for myself. When I think about safe sex, how hard it was for me in this new relationship and the first thing I told him was, "Look. I'm HIV-positive." And I had to throw that out there before I even wanted to consider, like, going on a date."
>
> 47 year old, White female (depression, substance use disorder)

Discussion

Results from in-depth interviews with PLWHA with multiple, intertwined mental health concerns provided informative insights into how participants perceived interconnections between their mental health diagnoses, as well as how these impacted their HIV health

behaviors. Participants also described the syndemic barriers that prevented acquisition, use, and maintenance of the gains of the cognitive-behavioral psychotherapy intervention.

Themes generated from our qualitative interviews provided insight for two separate, but related questions. First, how do syndemics affect an existing psychotherapy intervention for mental health and HIV self-care? Second, what do PLWHA who face multiple psychosocial health problems suggest would be helpful to address in future psychotherapy interventions? Results from these interviews are a first step in determining how to refine what works in existing psychotherapy interventions for PLWHA, identify unaddressed psychosocial challenges, and directly incorporate the needs of a complex and hard-to-reach patient population of multiply comorbid PLWHA.

With respect to the first question, participants identified in their interviews clear links among their psychological conditions and how these impacted their engagement in treatment. The role of the social environment, particularly inequality and lower social status, is understood to be a key factor in why health problems cluster within a syndemic (Singer, Bulled, Ostrach, & Mendenhall, 2017). Our own data suggested that PLWHA would benefit from interventions that can help reduce barriers to care early on in treatment, whether these are psychological or functional barriers. Our participants identified protracted substance use problems, exposure to violence, and homelessness as urgent issues that directly interfered with their HIV care. For psychological providers, collaborating with and connecting clients to case management for issues such as homelessness or partner violence, would be essential. This could necessitate incorporating social workers or other case managers early on to serve a complementary, interdisciplinary role when working with complex clients.

These findings also suggest how the structure of a psychotherapy intervention might be designed. Establishing the reduction of barriers to care as the first priority with a complex PLWHA client would likely improve treatment retention. This treatment logic is like that of other psychotherapies for psychiatrically complicated patients. These interventions typically target fundamental barriers to therapy attendance or dangerous client behaviors first before other issues can be reasonably focused on (e.g., dialectical behavior therapy; Linehan, 1993). For complex PLWHA, providers would want to collaborate with clients to articulate barriers to care, such as violence, financial limitations, or homelessness, and designate these as primary goals before mental health can be fully addressed. Our own qualitative findings suggest that PLWHA also understood how essential it was to reduce these barriers early in treatment.

With respect to specific mental health problems, our interviews highlight that combined treatment of substance use and other psychosocial problems (e.g., mood disorders) appears to be particularly needed. Substance use featured prominently for our participants as a barrier to focusing on treatment and learning the principles of cognitive-behavioral psychotherapy, particularly compared to other psychosocial concerns. Participants' focus on substance use could have been because problematic substance use causes impairment in multiple life areas (e.g., legal, financial, social network). It is also possible that participants who engaged in cognitive-behavioral therapy readily discussed substance use because it is a clear antecedent to negative feelings and behaviors. Combined treatments addressing

substance use with mood could improve the rate of success for PLWHA dealing with alcohol or substance use problems. This idea is consistent with growing literature on interventions for other psychological conditions comorbid with substance use (e.g., PTSD), which find that combined treatment is most appropriate (e.g., Roberts, Roberts, Jones, & Bisson, 2015; Zanberg et al., 2016).

However, one syndemic concern, although well-established in research literature, was surprisingly absent from our results. Despite high levels of childhood abuse and adulthood experiences of violence, relatively few participants mentioned these issues directly as barriers to treatment or as contributing to their health problems. If participants are not able to draw explicit connections between previous traumatic experiences and their current health, they are much less likely to seek appropriate mental health treatment for problems they do not realize are linked. This is particularly concerning given previous research has identified trauma as a contributor to more rapid HIV disease progression and worse immunological functioning (e.g., Pence et al., 2012; see Lesserman, 2008 for a review).

Several possible explanations exist for this interesting finding in our data. First, it is possible that because our qualitative interview guide asked about general mental health barriers to care, participants focused on psychosocial issues that were more immediately affecting them, such as substance use. Alternatively, participants could attribute all negative internal experiences, such as depressed mood, symptoms of PTSD, or anxiety, to general negative affect. Therefore, the specific effects of trauma might occur outside of awareness for some participants, in contrast to clear links participants could draw between the external influences of substance use on health and mood. Finally, it is also possible that behavioral avoidance of discussing past traumatic experiences led to these concerns being discussed less often during qualitative interviews. Interventions may need to explicitly help PLWHA learn and address connections between trauma and health, to the extent that this is a risk factor for poor health that PLWHA are less cognizant of.

In support of a unified conceptualization of the syndemic problems our participants faced, they provided some examples of ways in which they were able to apply cognitive-behavioral strategies learned in treatment of depression to other conditions (e.g., trauma, substance and alcohol use). Many of the cognitive-behavioral approaches used in treating depression, such as cognitive restructuring and behavioral activation, are broadly applicable to other types of disorders because they can be used to change common, underlying mechanisms. Unified treatments for psychopathology rely on this very premise and have been developing for some time (e.g., Ellard, Fairholme, Boisseau, Farchione, & Barlow, 2010; McEvoy, Nathan, & Norton, 2009; Pachankis, 2015; Willamowski et al., 2010). However, these types of psychotherapies have not yet been extended to the many psychosocial challenges faced by PLWHA. Future interventions for syndemic problems among PLWHA would benefit from providing psychotherapy clients with a unified case conceptualization of their various, interacting psychosocial concerns. In treatments that are intending to change multiple patterns of thinking and behavior, including various psychological concerns and health adherence behaviors, clinicians could help clients understand how to use multi-purpose strategies to address multiple, comorbid problems.

Participants also provided their perspectives on expanding the content of the psychotherapy intervention they received. Most participants felt that addressing sexual health in the context of overall HIV health behaviors would be acceptable and even beneficial. However, they acknowledged the need for an increase in treatment length to integrate the topic with other co-occurring problems. Many participants also emphasized social support, maintaining intimacy, finding romantic relationships, and navigating serostatus disclosure as central to their lives, but not directly built into the psychotherapy they received. These issues were prominent themes for participants when they were asked about concerns not addressed explicitly in the intervention. Other studies have demonstrated the salience of intimacy and sexuality for HIV-positive gay men (Remien, Carballo-Dieguez, & Wagner, 2010) and older HIV-positive women (Psaros, Barinas, Robbins, Bedoya, Safren, & Park, 2012). Our interviews highlight that a focus on topics salient to the general well-being of PLWHA are the most likely to be well-received.

Based on the results of our in-depth interviews, several opportunities to improve the success of syndemic interventions for PLWHA exist by: 1) making the reduction of psychological and structural barriers to care the initial treatment goal. This can be accomplished through using problem-solving strategies with clients, teaching emotion regulation skills, establishing collaborative case management; 2) helping clients explicitly draw links among their various psychological disorders, particularly trauma, and, in turn, how those disorders affect health; 3) explicitly incorporating issues related to overall well-being that are salient to PLWHA (e.g., intimacy, relationships), which could increase their interest in participating in a psychotherapy treatment.

Certainly, such intricate interventions could require longer durations of psychotherapy to successfully treat multiple conditions, as well as more experienced providers who can competently deliver multi-faceted interventions. Although these types of integrated, intensive psychotherapies may be more costly to deliver, they would be more appropriately comprehensive for clients with multiple syndemic conditions (Safren, Perry, Blashill, O'Cleirigh, & Mayer, 2016). We recognize that new interventions for these problems could take many forms, approaches, and theoretical orientations, although our own conclusions are specifically based on the opinions and experiences of participants living with multiple challenging syndemic conditions who received cognitive-behavioral therapy. We suggest our intervention design recommendations as simply a starting place for future research on designing flexible treatments for complex clients.

The current qualitative study benefits from several strengths, including diversity of the sample with respect to demographic background and the inclusion of multiple mental health concerns. Additionally, many of our findings might not have been interpreted in the right context or come to light at all without the direct perspective of our participants gathered with in-depth interviews. For example, the principal importance of environmental and structural barriers to care might have been neglected in a survey design focused on internal, psychological factors. In contrast, the limited acknowledgment by participants of the impact of trauma on their health by participants may have gone undiscovered had we used other research methods. We acknowledge that other qualitative approaches (e.g.,

phenomenological) besides the one used in this study might have identified other important findings from participants.

Nevertheless, the study is not without limitations. All participants had been involved in a specific cognitive-behavioral trial and their perceptions of treatment could be unique to cognitive-behavioral therapy or to the delivery of that particular intervention. Further, being interviewed after completing an intervention where participants received high levels of contact from supportive study staff may have biased how participants discussed their experiences in the intervention. Participants came from a small geographic area and their personal experiences may not be like that of PLWHA in other areas of the U.S. or elsewhere. Additionally, the numerous psychosocial challenges participants faced could have made it difficult for them to identify what concerns were most important to them or disentangle how different concerns impacted their lives, which underscores the need for trained mental health providers within this community. Data were collected prior to scientific evidence establishing that suppressed HIV viral load greatly reduces risk of transmission to HIV-negative partners (Cohen, Chen, McCauley, Gamble, Hosseinipour, et al., 2011; Attia, Egger, Muller, Zwahlen, & Low, 2009), as well as the advent of pre-exposure prophylaxis (PrEP) for preventing transmission (Grant, Lama, Anderson, McMahan, Liu, et al., 2010). Therefore, our qualitative interviews did not cover these critical new components of HIV prevention.

Medical and public health perspectives are coming to recognize the important role the social environment plays in the clustering of disease (e.g., Singer, Bulled, Ostrach, & Mendenhall, 2017; The Lancet, 2017). The perspectives of participants in our study articulated the personal impact of these multiple psychosocial and structural problems on their HIV health and well-being. Our interviews demonstrated how psychotherapy is especially desired and needed for PLWHA who face these challenges, particularly when such conditions might be harmful (e.g., substance use) or unrecognized by clients (e.g., trauma). This qualitative study offers a preliminary map for the development of future psychotherapy interventions for syndemic conditions for PLWHA, and suggests that a way forward is possible with comprehensive and flexible treatments.

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Clinical or Methodological Significance:

Although mental health comorbidity is common and often complex among clients living with HIV, little research exists to guide psychotherapy for such intricate mental health concerns. The current study used content analysis of in-depth qualitative interviews with clients living with HIV and multiple mental health comorbidities who had recently completed cognitive-behavioral therapy. Recommendations based on these findings suggest strategies for clinicians working with similar clients to consider and offers suggestions for future treatment development research.

Table 1.

Themes raised regarding unaddressed areas of HIV care within the intervention (*N*=30)

Themes	Illustrative Quote	Participants
Mental Health		
Other mental health diagnoses	**P:** *"Well I had a lot of issues with my parents…with PTSD…"* **I:** *"There's an elephant in the room you felt like you couldn't talk about because the intervention focused on depression"* **P:** *"Yeah. And I had to push that elephant out."*	8 participants
Trauma	*"It played a lot in my depression, like being sexually abused and having HIV…Like that's it, like my plate is full."*	3 participants
Stress	**"***Stress…and what causes stress, recognizing stress…There might be other things that come up that cause stress...and learning to recognize what those are, and how to respond to them."*	1 participant
HIV Self-care		
HIV education (e.g., transmission, nutrition)	*"Because a lot of people with HIV, they gain weight and lose weight, they gain weight and lose weight…how your body reacts to this. I thought they should have covered a little of that."*	5 participants
Illness reminders	*"Cause when I look at them* [HIV medication] *I see HIV, and I don't wanna deal with that, because I just don't wanna deal with that right now"*	1 participant
Medications (i.e., HIV, psychotropic)	"*I just seem to feel like when you're putting a substance into – a chemical* [HIV medication}, *into your body, that affects your state of mind."*	1 participant
Personal Relationships		
Relationships (e.g., family, romantic)	*"It occurred to me that people who live with people who have mental illness need to know how to cope with it."*	8 participants
Disclosure	**"***When do you tell? When don't you tell? When you definitely shouldn't tell? I've never had an answer for that one."*	1 participant
Social Stressors		
Religion/Spirituality	*"For me, that was such a big part of things* [religion]. *And then it was the opposite of being gay…Throw my religion into it, on top of depression, on top of anxiety, on top of medicine, maybe it was too much."*	2 participants
Sexual Minority Stress	*"…internalized homophobia….I was trained to kind of judge myself because of that. I imagine how many people go through something like that, and they don't recognize how damaging it is."*	1 participant
Structural Barriers		
Homelessness	*"Yeah, housing. There's so much homelessness for everybody…to motivate them to not give up on themselves"*	2 participants

P = participant; I = interviewer