The Relationship Between Intersectional Drug Use and HIV Stigma and HIV Care Engagement Among Women Living with HIV in Ukraine

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Accepted: 6 November 2022 / Published online: 28 November 2022 © The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2022

Abstract
This study used an intersectional approach to explore the association between enacted and internalized drug use and HIV stigma on HIV care outcomes among HIV-positive women who inject drugs in Ukraine. Surveys were conducted in Kyiv in 2019–2020. Among the 306 respondents, 55% were engaged in HIV care. More than half (52%) of participants not engaged in care reported internalized stigma related to both drug use and HIV status (i.e., intersectional stigma), compared to only 35% of those who were engaged in HIV care. Among those engaged in care, 36% reported intersectional enacted stigma compared to 44% of those not engaged in care; however, this difference was not statistically significant in the univariable analysis (p = 0.06). In the univariable analysis, participants who reported intersectional internalized stigma had 62% lower odds of being engaged in HIV care (OR 0.38, 95% CI 0.22, 0.65, p < 0.001). In the adjusted model, reported intersectional internalized stigma (aOR 0.52, 95% CI 0.30, 0.92, p = 0.026), reported intersectional enacted stigma (aOR 0.47, 95% CI 0.23, 0.95, p = 0.036), and knowing their HIV status for more than 5-years (aOR 2.29, 95% CI 1.35, 3.87, p = 0.002) were significant predictors of HIV care engagement. These findings indicate that interventions to improve HIV care engagement must address women’s experiences of both HIV and drug use stigma and the different mechanisms through which stigma operates.

Keywords Intersectional stigma · Drug use · HIV care engagement · Women living with HIV · Ukraine

Introduction
In Ukraine, which has one of the largest HIV epidemics in Europe, about 250,000 people are living with HIV and 15,968 people acquired HIV in 2020 [1]. An estimated 82% of people living with HIV (PLWH) who knew there HIV status were linked to care and receiving antiretroviral therapy (ART) at the beginning of 2020, up from 42% in 2013 [2]. In Ukraine, HIV care is only delivered through specialized publicly funded AIDS centers and their affiliates, and HIV medication and treatment is provided for free to all patients registered with an AIDS center. Previous studies have identified factors such as low HIV knowledge and a fragmented, bureaucratically complex health care system as barriers to access HIV care [3]. Despite overall improvements in HIV care cascade indicators, significant gaps remain among women living with HIV (WLWH). New HIV infections among women (aged 25 and older) more than doubled in seven years, from 1814 in 2005 to 5057 in 2012 [4]. Only 58% of HIV-positive people who inject drugs (PWID) are aware of their HIV status and 70% of PWID aware of their HIV-positive status were on ART [5].

As of 2016, women constituted 42.5% of PLWH in Ukraine [6]. While only 18% of the total sample in one study of Ukrainian WLWH indicated intravenous drug use as the mode of transmission, these women represented nearly half of the women who presented with AIDS [7]. An analysis of the 2017 Integrated Bio-Behavioral Surveillance survey data collected among PWID across 30 Ukrainian cities found that the HIV prevalence among women who inject drugs was 31.4% [5]. Among the WLWH in the sample, 63.7% were
aware of their HIV status and of those, 69.9% initiated ART and of those, 72.6% were virally suppressed. However, of the total number of WLWH in the sample, just 47% were on ART and 35% were virally suppressed [5].

Ukrainian WLWH with histories of drug use experience worse health outcomes and greater negative social interactions than other WLWH. Among Ukrainian WLWH who indicated injection drug use as their mode of infection, the median delay between diagnosis and registration in care (i.e., linking to care and enrolling as a new patient) was 87 days, compared to 34 days for women diagnosed through antenatal testing [7]. In a cohort study of 8884 HIV-positive Ukrainian women, negative birth outcomes (preterm delivery and small for gestational age) were associated with history of injection drug use [8]. The Stigma Index, which included results from 1500 PLWH, found that 24% of WLWH, compared to 7% of men living with HIV, were advised by a health care professional not to have children [9]. One study documented that women in Ukraine who received a positive HIV diagnosis as part of standard of care for pregnancy often encountered negative or stigmatizing experiences, such as being told not to get married and to have an abortion, and doctors talking about their test results openly or telling partners, employers, and family members about the test result without the woman’s consent or knowledge [10]. In response to internalized negative feelings and negative experiences with service providers and family [11], WLWH in Ukraine make self-discriminating decisions, including not applying for jobs or social assistance, avoiding medical visits, and isolating themselves from family and friends [12].

Women who use drugs must also navigate complicated bureaucratic systems that reinforce their marginalized status, create barriers to government support, and fail to meet their specific needs as mothers and people who use substances [13, 14, 15]. Research indicates that stigma, discrimination, and loss of confidentiality in the service delivery setting also impact the ability of women who use drugs to receive essential services [16, 17]. Women who use drugs are more likely to delay approaching health facilities than men who use drugs (World Health [18]. Women may try to hide their drug use to avoid negative reactions associated with breaching stereotyped gender roles, or may fear that their children will be removed from their custody if authorities learn of their drug use from entering or leaving a needle exchange site [19, 20]. Women who use drugs also face additional stigma in healthcare settings and from law enforcement due to gender disparities and the lack of tailored services towards women [21]. WLWH and histories of drug use must also navigate repressive drug policies, including detention without arrest, police harassment, registration as a drug user to receive services, and diminished employment opportunities [21]. Ciambrone [22] found that among WLWH in the United States, those with histories of drug use were less likely to have supportive familial networks than other WLWH, and women expressed concern about disclosing their HIV status due to its association with stigmatized behaviors such as drug use.

**Stigma and HIV Outcomes**

As the experiences of WLWH suggest, HIV and drug use stigma remain a major barrier to care, leading to poor health outcomes [23]. Stigma is a social phenomenon in which individuals or groups are devalued based on certain traits and the experiences of exclusion, rejection, judgment, and blame that result [24, 25]. As Link and Phelan [26, p. 367] note, “stigmatization is entirely contingent on access to social, economic, and political power” and people assigned to stigmatized categories are disadvantaged in terms of socioeconomic status, medical treatment, and health. Earnshaw & Chaudoir [24] use the concept of a stigma mechanism to explain how possessing a devalued attribute leads to a negative outcome, including how other people react to this knowledge and how the individual with the devalued attribute reacts. At the individual level, stigma affects health outcomes through three primary mechanisms: anticipated, internalized, and enacted. Anticipated stigma refers to degree to which an individual expects they will experience prejudice or discrimination. Enacted stigma is defined as experiences of stigma enacted on the individual from an external force, such as experiences of discrimination, stereotyping, and prejudice [24]. Individuals may experience poor treatment from health care providers, rejection from friends and family, social isolation, and lack of employment because they belong to a stigmatized group. Internalized stigma refers to the degree to which one endorses the negative attitudes and beliefs that one is devalued because of their possession of a devalued trait [24]. Internalized stigma is associated with negative health outcomes, particularly depression, psychological distress [27], feelings of helplessness, and lower acceptance of one’s health condition [28, 29]. As a result of these stigma mechanisms, people may not engage in health-seeking behaviors to avoid thinking about their condition or a lack of a sense of self-worth [30], delay seeking care, and experience low social support and its attendant consequences (e.g., economic insecurity, depression, isolation) [31, 32].

Contemporary stigma research recognizes that people may belong to multiple stigmatized groups and that focusing on a single dimension of disadvantage (such as socioeconomic status or gender) obscures the ways in which these multiple identities interact and are compounded to produce specific health outcomes or statuses [33, 34]. Recognizing that people may belong to multiple stigmatized groups and understanding how these multiple identities affect health and well-being requires an intersectional approach. An
intersectional perspective is based on the tenet that social categories are interdependent and mutually constitutive; one aspect of identity cannot explain health outcomes or social disadvantage [23, 35]. Historically, PLWH have been highly stigmatized for both their HIV status and negative attitudes about modes of HIV transmission and identities of groups vulnerable to HIV, including injection drug use.

The scientific evidence is consistent across populations and settings that stigma is associated with poor outcomes. HIV stigma is associated with poor HIV medication adherence [36], worse health outcomes [32], lower health care utilization [37], and low self-reported health status, low HIV medication adherence, and diminished mental health [38, 39]. Drug use stigma is also associated with poorer access to health care [37], suboptimal engagement in HIV care [40], increased injection risk behaviors [41], and decreased use of harm reduction and medical services [42]. Other studies have shown enacted and internalized HIV stigma are associated with poorer HIV care outcomes [43, 44, 45].

Although there is an extensive body of literature on the impacts of various types of stigma on health outcomes, little is known about the intersection of stigma related to HIV and drug use among women and the mechanisms through which this stigma affects HIV care outcomes. The experiences of WLWH who also use drugs are embedded in and shaped by gender norms, attitudes, and expectations around ideal womanhood and negative stereotypes about people who use drugs [46, 47, 48, 49]. This paper explores the relationship between enacted and internalized drug use and HIV stigma and HIV care outcomes among WLWH who inject drugs in Ukraine. As Metsch et al. [21] note, data on women who use drugs is often combined with data from women involved sex work or partners of people who inject drugs and few countries disaggregate data by gender or drug use. Understanding the effects of intersectional stigma and the mechanisms through which stigma affects HIV care engagement is a key step in developing tailored interventions that can improve all points along the HIV care continuum. Identifying and modifying barriers to HIV care is particularly important in Ukraine, where significant resources have been invested to improve access to treatment and care but gaps in the care cascade remain.

**Methods**

**Study Setting and Procedures**

This study was conducted among WLWH who reported recent injection drug use in Kyiv City, Ukraine. Kyiv is Ukraine’s largest city and in 2019, 1490 new cases of HIV were detected in the city. Overall, in Kyiv City, only about 52% of newly diagnosed PLWH were linked to HIV care services (compared to 82.6% nationally) [2]. All participants provided oral informed consent prior to data collection. Study procedures were reviewed and approved by the Institutional Review Boards at Johns Hopkins Bloomberg School of Public Health and the Ukrainian Institute on Public Health Policy.

**Participants**

Between December 2019 and November 2020, 310 WLWH and histories of injection drug use were recruited. Inclusion criteria included: identifying as female, living in Kyiv City, being 18 years of age or older, reporting injection drug use in the previous 3 months, and being HIV-positive (confirmed with a rapid test at the time of study consent). Participants were recruited using a combination of direct outreach and participant referral methods. At the outreach routes (where PWID come to have rapid HIV test or to get syringes) and at the needle and syringe program (NSP) sites of two Kyiv-based nongovernmental organizations that work with PLWH, social workers approached those female clients who had been previously or recently tested HIV-positive and asked them if they were interested in participating in a research study. Women recruited from service agencies were asked to refer friends and associates to the study, particularly those who are not currently receiving services from that agency. Women were given information about the study to distribute to interested family and friends. Study staff told interested women about the study and offered them participation, contingent on eligibility. Individuals who agreed to take part in the study were given the contact information for study staff to schedule a time, date, and place to conduct an eligibility screening and complete the survey if eligible.

**Data Collection**

Study participants completed a single, two-part survey. The first part of the survey was interviewer-led in Russian or Ukrainian according to the participant’s preference. This section of the survey elicited demographic information and an egocentric social network. An egocentric social network, or personal network, asks a participant (i.e., ego) to identify social contacts (i.e., alters) and characterize their relationships [50]. In this study, the interviewer first prompted the participant to list all the individuals in their social network. To elicit a comprehensive list of social network members (alters), participants were asked a series of structured questions that included who they lived with, talked to about personal things, lent money to or borrowed money from, helped them with small tasks, socialized with, injected drugs with, had sex with, and worked with. Using this list of alters, the interviewer then followed a structured questionnaire to elicit demographic,
relationship, and behavioral information about the alters. The second part of the survey (covering HIV care, drug use, social support, and mothering) was self-administered in Russian. The survey took one and half to two hours to complete. Participants received 400 hryvnia (about 15 USD) for completing the survey.

### Measures

#### Enacted and Internalized Stigma

Enacted drug use stigma was assessed using eight questions, based on Earnshaw et al. [28] and modified based on preliminary research. For each alter in their social network, participants were asked, “How frequently does this person treat you this way because of your drug use.” The questions were (1) “avoid you,” (2) “look down on you,” (3) “treat you differently,” (4) “did not take you seriously,” (5) “avoid touching you,” (6) “treated you with less respect,” (7) “not listened to you,” (8) “been critical of your behavior.” The answer options for each were “never,” “rarely,” “50/50,” “sometimes,” “always.” The same questions were asked about how alters treated the participant based on their HIV status. Participants were categorized as experiencing enacted stigma related to drug use or HIV status if they replied “50/50,” “sometimes” or “always” to any of the eight questions for at least one alter.

Internalized drug use stigma was assessed using nine questions [28]. Participants were asked if: (1) Using drugs makes me feel like I’m a bad person; (2) I feel I’m not as good as others because I use drugs; (3) I feel ashamed of using drugs; (4) I think less of myself because I use drugs; (5) Using drugs makes me feel unclean; (6) Using drugs is disgusting to me; (7) I don’t pay attention to how others feel about me because I use drugs; (8) I accept using drugs as part of how I am right now; and (9) I take and make opportunities to educate people around me about drug use. The answer options were “strongly disagree,” “disagree,” “neither disagree nor agree,” “agree,” and “strongly agree.” To measure internalized HIV stigma, the participants were asked the same nine questions but as they related to their HIV status. The answer options were the same. Scores were calculated by summing responses (1 = strongly disagree, to 5 = strongly agree) and dividing by the 9 questions, resulting in a scale from 1 (no stigma) to 5 (high stigma). Items 7–9 were reverse coded. The median values of 3.56 and 2.78 were used as the cut-points to define internalized drug use and HIV stigma, respectively (cf. [37]).

### Intersectional Drug Use & HIV Stigma

To assess the intersectionality of enacted HIV and drug use stigma, a categorical variable with four options was created: (1) the participants did not experience any enacted stigma by social network members; (2) the participant experienced enacted stigma from their social network related to their drug use only; (3) the participant experienced enacted stigma from their social network related to their HIV status only; and (4) the participant experienced enacted stigma from their social network related to their drug use and HIV status.

To assess the intersectionality of internalized HIV and drug use stigma, a categorical variable with four options was created: (1) the participants reported no internalized stigma; (2) the participant reported internalized stigma related to their drug use only; (3) the participant reported internalized stigma related to their HIV status only; and (4) the participant reported internalized stigma related to their drug use and HIV status.

### Outcome Measure: HIV Care Engagement

The outcome of interest was HIV care engagement. Participants were considered “in care” if they reported two HIV visits more than 3-months apart within the last year or if they had one HIV visit within 3-months of their study visit, following the Health Resources and Services Administration (HRSA) definition of HIV care retention [51]. All other participants were classified as “not in care,” for example those who reported less than two HIV care visits in the previous 12-months or if they had not received HIV care within the last 12-months.

### Other Covariates

Age was dichotomized using median age as the cut-point. Long-term relationship included participants who stated they were married, in a long-term relationship but not living together, or living as married but not officially married. If a participant was single, divorced, widowed, or other, then they were not considered being in a long-term relationship. Having any children was a dichotomous yes/no variable. Those who reported any children was a dichotomous yes/no variable. Those who reported any children were dichotomized as those who had reported having any children less than 18 years old or 18 years of age or greater. Participants were asked to describe their current financial situation. Responses were categorized as either just able or unable to meet basic needs versus able to meet most or all needs. Employment status was categorized as regular/steady work, which was defined as regular full or part-time work; occasional work/unemployed, defined as occasional or seasonal work, or being unemployed; and not looking for work, defined as being on disability and therefore unable to
work or a homemaker, full-time student, or retired. Education history was dichotomized as any post-secondary education (technical college, non-finished higher education, or completed higher education at a university) or less (10–12 years of secondary school, or 8–9 years or less of secondary school). The CESD-10 was used to assess depressive symptoms, with a score of ≥ 10 indicating signs of depressive symptoms [52]. Time since HIV diagnosis was dichotomized using the median number of years (5 years) as the cut-point. Finally, participants were asked to report which drug they used more frequently. The answer options were stimulant, street methadone (i.e., purchased on the street or not received through an OAT program), street buprenorphine, homemade opioids (e.g., poppy straw extract, shirika, chernaya), medical opioids (e.g., morphone, tincture opium, codeine, tramadol, omnopon, promedol, koderpin), or other opioids from a pharmacy (e.g., tropicamid, rhinasinol). The variable was dichotomized as either stimulant or opioid.

**Statistical Analysis**

Participant characteristics by HIV care engagement were compared using Pearson’s chi-squared test or Fisher’s exact test for categorical and binary variables. Four participants had missing data and were not included in the analysis. Univariable and multivariable logistic regression analyses were used to examine the association between experiencing enacted and/or internalized stigma and HIV care engagement. Variables in the final multivariable model were chosen based on a priori hypothesis because they were associated with HIV care in the literature or had a p-value < 0.01 in the univariable analysis. In addition to the exposures (internalized and enacted stigma), variables in the multivariable model included age, whether the participant has any children, the length of time that the participant has known their HIV-positive diagnosis, and injection drug use frequency. The model selection process explored the inclusion of an interaction term between the internalized and enacted stigma mechanisms; however, this model was limited by small cell sizes and did not improve model fit based on Akaike Information Criteria (AIC) values. Additionally, due to small cell sizes in the group that reported enacted HIV stigma only, a model was tested that excluded the three participants represented in that category. That model produced similar results as the final multivariable model outlined above. All analysis was performed using StataMP 17 (StataCorp, College Station, Texas).

**Results**

In this sample of 306 HIV-positive women who inject drugs, 55% were engaged in HIV care (Table 1). The median age was 34 years, 58% were in a long-term relationship, 9% had enough money to meet most financial needs, 36% had regular employment, and 64% had technical training or some level of higher education. A higher percentage of women engaged in HIV care had children (61% versus 41%, p = 0.04). In both groups, opioids were the most used drug and a higher percentage of participants who were not engaged in HIV care injected drugs daily (53% versus 44%, p = 0.1). Most participants did not report any experience in medication-assisted treatment (MAT) programs for drug use (37% had been enrolled in MAT among those engaged in HIV care and 36% among those not engaged in HIV care, p = 0.93). A more detailed breakdown of participant characteristics is available in Supplemental Table I.

When comparing reported internalized stigma, there were significant differences (p < 0.01) between participants engaged in care versus not engaged in care. A larger percentage of women engaged in HIV care did not report any internalized stigma related to drug use or HIV status (44% versus 25%) compared to those not in care. More than half (52%) of the participants who were not engaged in care reported internalized stigma related to both drug use and HIV status, compared to only 35% of those who were engaged in HIV care. Although there were differences in the frequency of reported enacted stigma between the care engagement groups, these differences were not statistically significant (p = 0.10). Roughly 25% of those in HIV care and 16% of those not in HIV care did not report enacted stigma related to drug use or HIV. Among those not in care versus in care, 44% and 36% reported enacted stigma for both drug use and HIV status, respectively.

In the univariable analysis, participants who reported internalized stigma for drug use only had 56% lower odds of being engaged in HIV care compared to those who reported no internalized stigma (OR 0.44, 95% CI 0.21, 0.91, p = 0.027). Those who reported internalized stigma related to HIV status only had 43% lower odds of being engaged in HIV care (OR 0.57, 95% CI 0.24, 1.36, p = 0.21), and those who reported intersectional stigma had 62% lower odds (OR 0.38, 95% CI 0.22, 0.65, p < 0.001) compared to those who reported no internalized stigma (Table 2). Participants who reported enacted intersectional stigma had 49% (OR 0.51, 95% CI 0.27, 0.96, p = 0.035) lower odds of being engaged in HIV care compared to those who reported no enacted stigma. Having children (OR 1.65, 95% CI 1.02, 2.66, p = 0.04) and being diagnosed with HIV for more than 5-years (OR 2.25, 95% CI 1.42, 3.57, p = 0.001) were both associated with higher odds of HIV care engagement. In the adjusted model, reported intersectional internalized stigma (aOR 0.52, 95% CI 0.30, 0.92, p = 0.026), intersectional enacted stigma (aOR 0.47, 95% CI 0.23, 0.95, p = 0.036), and knowing their HIV status for more than 5-years (aOR 2.29, 95% CI 1.35, 3.87, p = 0.002) remained significant predictors of
HIV care engagement after adjusting for age, whether they had children, and injection drug use frequency.

**Discussion**

This study explored both internalized and enacted intersectional HIV and drug use stigma among Ukrainian WLWH and their impact on HIV care engagement. The analytic approach taken in this paper sought to understand the effect of experiencing a single type of stigma (HIV or drug use) versus multiple stigmas (HIV and drug use) and different stigma mechanisms (internalized and enacted) on HIV care engagement. This analytic strategy revealed that intersectional drug use and HIV stigma was associated with being not engaged in care through two distinct mechanisms (internalized and enacted stigma). When adjusting for other variables, enacted and internalized stigma for both HIV and drug use was negatively associated with HIV care engagement. The finding that intersectional enacted and internalized stigma remained significant predictors of HIV care engagement after adjusting for age contrasts with prior studies that...
found that age does not predict enacted stigma [53] while older age and longer time since HIV diagnosis may be associated with lower internalized stigma [54]. These findings mark an important advancement in understanding how intersectional stigma affects health outcomes by demonstrating that interpersonal acts of discrimination, rather than feelings of shame or worthlessness alone, are associated with lower care engagement.

Importantly, in the current study, enacted stigma for both HIV and drug use was assessed within participants’ social networks, rather than through generic measures of stigma or specifically in healthcare settings. Many prior studies identify stigmatizing experiences (enacted stigma) within healthcare settings (e.g., discriminating behaviors, loss of confidentiality, negative attitudes of healthcare workers) as possible ways in which HIV (or related) stigma discourages PLWH from seeking or remaining in care [55, 56]. The finding that enacted drug use and HIV stigma negatively affected HIV care engagement suggests that stigma reduction interventions must address attitudes and behaviors within participants’ social networks rather than among healthcare providers alone. This study’s findings also address that multiple stigma mechanisms (enacted and internalized) should be accounted for in interventions that aim to reduce stigma and increase HIV care engagement.

These findings indicate that interventions to address stigma and its role in HIV care engagement must address women’s experiences of both HIV and drug use stigma, which are often rooted in gender stereotypes and expectations around motherhood and gender identity [13, 57, 58]. In a qualitative study of WLHW in the United States, Rice et al. [59] found that participants experienced multiple forms of stigma, including racism, economic discrimination, and sexism, in addition to HIV-related stigma. Any single dimension of stigma could not be disentangled from others and negative connotations of specific aspects of their identity (e.g., being Black, female, and HIV-positive) were reinforced in their interactions with family, community members, and potential employers (e.g., [60]. While teaching coping skills and increasing resilience to address internalized stigma is important [61, 62], coping skills alone will likely be insufficient to address the stigma-related barriers to care that WLHW and histories of drug use encounter based on negative associations around drug use and HIV among women, particularly mothers. In this study, having children was associated with higher odds of HIV care engagement. Studies have document that among WLWH motherhood is an important part of identity, self-worth, personal joy, and motivation [63]. Attending to women’s roles as mothers HIV care engagement in interventions in antenatal care.
settings [64] and across the life course (outside the period of pregnancy and infancy) should be incorporated into stigma reduction and HIV care engagement interventions as well.

This study was conducted in 2020 and 2021, prior to the Russian attack on Ukraine in 2022. When Russia invaded Ukraine in 2014, resulting in the annexation of Crimea and a sustained military conflict in the Donbas region, essential services for PWID and PLWH were severely disrupted [65, 66] and people who remained in Russian-controlled territories were subjected to Russian’s harmful public health policies, including being cut off from medications for opioid use disorder [67, 68]. The outcome of the 2022 Russian invasion of Ukraine is unknown, but the consequences for marginalized populations such as the women who participated in this study could be severe. During periods of severe and active conflict, if HIV medication supplies are not maintained, people are unable to visit health care facilities, or HIV care programs are deprioritized in favor of other immediate concerns (shelter, security, food), then people risk falling out of care and skipping HIV medications [69, 70]. While short periods of treatment interruptions may not lead to resistance and HIV treatment can be successfully implemented in conflict settings [71], prolonged treatment gaps and disengagement from HIV care can lead to poor health outcomes [72, 73]. In contrast to the 2014 conflict, which affected a limited geographic region of Ukraine, the current war has had profound disruption throughout the country. The women in this study were particularly marginalized and may not have the economic or social resources to migrate out of the conflict zone and access HIV care in new location (within Ukraine or internationally). The instability and uncertainty caused by the war, compounded by the social and health impacts of the COVID-19 pandemic, are likely to have detrimental effects for HIV care engagement for WLWH in Ukraine [74, 75].

This study had several limitations. The analysis did not include other types of stigma, such as prior incarceration [76, 77] or sex work [78, 79], which other studies indicate may also affect HIV care engagement and other health outcomes. In addition, considerable attention has been paid to the ways in which intersectionality is measured both qualitatively [33, 80] and quantitatively [81, 82, 83]. Limitations in quantitative assessment of intersectionality and health outcomes include the narrow operationalizations of intersectional groups (e.g., limiting analysis to binary measures of social statuses) and inability to capture the cumulative effects of discrimination and disadvantage across the life course [82]. Similarly, the observational nature of the study precludes causal inference. In addition, while this paper focused on understanding the effect of intersectional and individual stigma mechanisms, the sample size in this study was not sufficiently powered to analyze an interaction effect between the two stigma mechanisms. Finally, although an effort was made to recruit participants from a range of community-based settings and not exclusively at sites where they receive HIV care, women who were in HIV care were overrepresented in the study population. The results may underestimate the true association between stigma and HIV care status given that women who felt the most stigmatized may also be the most hidden and disconnected from service providers.

Conclusion

The accumulation of scientific evidence indicates that stigma undermines HIV care engagement among diverse populations and across settings. Structural factors such as forced disclosure of HIV status, repressive drug policies, complex bureaucracies, and differential treatment of women who use drugs remain significant barriers to HIV care engagement. The findings of this paper indicate that it is also important to understand how interpersonal factors—specifically intersectional enacted and internalized stigma around HIV and drug use—can undermine engagement in care. Understanding how stigma operates in a highly marginalized population can be mobilized to create more effective, targeted, and multi-level interventions to reduce stigma and increase HIV care engagement. Service providers and programs directed at WLWH with histories of drug use should be tailored to better engage women who experience stigma across multiple settings, including within their social networks and in service provision contexts to keep them engaged in care. Low threshold and confidential services may help engage and retain women in care [84, 85] and serve as an entry point for marginalized women to be linked to other services [86]. At the same time, these services must not re-inscribe or ignore stigmatized identities and should be mobilized to help women to address the forms of stigma they experience in their everyday lives.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s10461-022-03925-w.

Acknowledgements This research was supported by funding from the National Institutes of Health/Fogarty International Center (Grant No. 1R21TW011060-01). We also thank the staff at Club Eney and Convictus for their support of this project and their commitment to serving people living with HIV. We are also grateful to our study participants who generously shared their time and experiences to this project.

Author Contributions JO: conceptualization, funding acquisition, methodology; writing—original draft preparation, review & editing; SF: writing, review, & editing; CC: formal analysis, writing, review & editing; MD-R: conceptualization, investigation, review & editing; TK: conceptualization, investigation, review & editing; KT: conceptualization, investigation, review & editing.

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Data Availability Requests for data and instruments described in this study may be requested from the corresponding author.

Code Availability Not applicable.

Declarations

Conflict of interest The authors have no financial, consultative, or institutional interests that might lead to bias or conflict of interest.

Ethical Approval This study was reviewed and approved by the Institutional Review Boards at the Johns Hopkins Bloomberg School of Public Health and the Ukrainian Institute for Public Health Policy.

Consent to Participate All participants provided oral consent.

Consent for Publication Not applicable.

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