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You can't do this job when you are sober: Heroin use among female sex workers and the need for comprehensive drug treatment programming in Kenya

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ABSTRACT

Aims: Globally, women who use drugs often practice sex work and experience multiple health and social harms that complicate their drug treatment needs. In East Africa, understanding the emergence of heroin use among women is critical in efforts to build effective drug treatment programming, including the ongoing scale-up of medication-assisted treatment (MAT). We explored heroin use among women engaged in sex work in Kenya to inform services.

Methods: In a qualitative study of 45 female sex workers reporting substance use in Kisumu, Kenya, 32 reported lifetime heroin use and comprise the focus of this analysis. Semi-structured interviews explored histories of substance use and sex work and health programming needs. Thematic analysis focused on the contexts and meanings of heroin use.

Results: Among 32 women, median age was 28 (range: 18–37). Women commonly smoked cocktails containing heroin while using alcohol and other drugs prior to sex work. Most women perceived heroin to engender "morale" and "courage" to engage in sex work and "fight" potentially abusive clients. Sex work reinforced drug use in ways that both managed and created new risks.

Conclusions: Drawing on the concept of "paradoxical autonomy," we suggest that heroin use engenders new forms of autonomy allowing women to support themselves in conditions of uncertainty, yet does not enable them to entirely overcome their vulnerabilities. Drug treatment programs for sex workers should address the situated logics of substance use in contexts of sexual risk, including patterns of poly-substance use that may render MAT inappropriate for some women who use heroin.

1. Introduction

Globally, female sex workers experience disproportionate health and social harms including HIV, sexually transmitted infections (STIs), viral hepatitis, reproductive health concerns, stigma, and violence (Beyrer et al., 2015; Shannon et al., 2015). Sex workers often use alcohol and drugs for social, coping, and job-related reasons, exacerbating their vulnerabilities (Dixon et al., 2015; Li et al., 2010; Needle et al., 2008; Wechsberg et al., 2006). Unfortunately, programs often fail to acknowledge the situated logics of women's substance use, including that not all women are willing or even able to stop sex work or drug use (Strathdee et al., 2015). Creating appropriate drug treatment programs for sex workers requires a comprehensive understanding of women's substance use, particularly in resource-constrained settings where research is limited and evidence-based drug treatment programs are only beginning to emerge.

In sub-Saharan Africa, as elsewhere, women often engage in sex work due to poverty, family caretaking responsibilities, and gendered inequalities that constrain women's opportunities (Scheibe et al., 2012; Scorgie et al., 2011). Heavy alcohol use, commonplace in sex work venues, may increase sexual risk, violence victimization, and HIV transmission (Chersich et al., 2007; Lancaster et al., 2018; Leddy et al., 2018). Emerging patterns of drug use across the continent may also intensify the HIV epidemic and produce new risks for women (Needle et al., 2008; Wechsberg et al., 2006).

Heroin markets are rapidly developing across East Africa, where

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women who use heroin commonly engage in sex work and unsafe injection practices (Beckerleg and Hundt, 2005; McCurdy et al., 2010). As a dual HIV prevention and drug treatment strategy, Tanzania and Kenya have introduced medication-assisted treatment (MAT) programs (Ratliff et al., 2013; Rhodes et al., 2016), representing critical opportunities to address women's complex treatment needs. However, in Tanzania, violence and experiences of discrimination often limit women's program utilization (Balaji et al., 2017) and trust in providers (Zamudio-Haas et al., 2016). In Kenya, the treatment needs of women who use heroin use remains understudied.

In Kisumu, western Kenya, sex work and alcohol use are already widespread within a developing heroin market. Our prior research on the emergence of injection drug use documented overlapping sexual and drug-related risk behaviors, including sex work and poly-substance use; women in our study had four times higher odds of prevalent HIV infection than men (Syvertsen et al., 2015). In 2017, Kenya's newest MAT clinic opened in Kisumu to address growing concerns around heroin use. Ensuring program success will require monitoring patterns of heroin use and identifying service needs among vulnerable populations, including women.

Our ongoing fieldwork in Kisumu has highlighted the need to understand not only injection practices but the drivers and contexts of injection and non-injection heroin use in relation to a largely sexually-driven HIV epidemic where general prevalence already reaches 18.7% (National AIDS Control Council (NASCOP, 2014). Qualitative methods are well-suited to explore emergent phenomena, as an iterative approach allows researchers to explore emic (insider) perspectives and probe for details about unanticipated findings. Given the rapidly changing landscape of drug use and HIV risk in Kisumu (Syvertsen et al., 2016) and global evidence of the complex treatment needs of female sex workers who use drugs (Wechsberg et al., 2009), we conducted a qualitative study of substance use among women engaged in sex work to inform the scale-up of MAT and other drug treatment services.

2. Materials and methods

2.1. Study design and sample selection

From August–December 2016, we conducted qualitative interviews with 45 female sex workers. We used targeted and snowball sampling (Watters and Biernacki, 1989) to recruit women who were ≥18 years old; reported trading sex for money, alcohol, drugs, or other items in the past month; reported heavy alcohol use (≥5 drinks at once or getting drunk most or all of the time when drinking) or any injection or non-injection drug use in the past month; and experienced any physical or sexual violence in the past year. We purposively selected participants for variation in age and alcohol versus drug use to capture diverse experiences. Eligible participants provided written consent for protocols approved by the Ohio State University and Maseno University in Kenya.

2.2. Data collection

Semi-structured interviews explored early life experiences, social relationships, sex work, alcohol and drug use, and health service needs. Questions about drug use were deliberately broad (e.g., "Tell me about the first time you used drugs"), and probes elicited descriptions of current use, contextual factors contributing to drug use, and motivations for alcohol or drug use for sex work. The PI or a trained Research Assistant conducted interviews in a private office lasting up to 90 min in the participant's language of choice (English, Swahili, or Dholuo). Interviews were recorded, transcribed, and translated by trilingual staff. We conducted interviews until we reached saturation, or repeatedly heard similar information across interviews and determined that further data collection would not generate significant new insights (Guest et al., 2006).

2.3. Data analysis

To analyze data, we developed deductive codes (including categories drawn directly from interview guides) and inductive codes (topics that emerged during interviews). First, the research team read through selected interviews and independently generated possible codes (Ryan and Bernard, 2003). We then discussed and refined these codes and constructed a draft codebook for an initial round of coding. After finalizing the codebook, one analyst coded all transcripts, and the PI checked code application for consistency.

Our thematic analysis represents an iterative, interpretive process focusing on the meaning of experiences and behaviors within broader contexts (Guest et al., 2011). The lead author read through text broadly content-coded for drug use for a general understanding and identified 32 women who reported lifetime injecting or smoking powder that we interpret to be heroin (as explained below). Drawing on the concept of "addiction trajectories," which calls attention to the contingency of factors shaping drug use patterns over time (Raikhel and Garriott, 2013), the analyst wrote brief summaries for each woman organized around common individual, social, and contextual factors driving heroin initiation and continued use. Strong associations between sex work and poly-drug and alcohol use were evident across interviews; an additional reading identified linkages between practices and rationales specifically associated with heroin use in this context. To capture the full diversity of experiences in our sample, we also parsed out the negative cases who discontinued using heroin or never used heroin directly before sex work (Bernard, 2002). Key themes are described below and illustrated using representative quotes and pseudonyms to protect confidentiality.

3. Results

3.1. Study sample

Among the 32 women who reported lifetime heroin use, the median age was 28 (range: 18–37). Half (56%, n = 18) were born in Kisumu; nearly all (n = 30, 94%) had experience migrating and living elsewhere. Most had a spouse or steady partner (72%, n = 23); all but 3 women had children (median: 2 children). All women initiated sex work due to financial hardship, family deaths, caretaking responsibilities, and otherwise limited options; alcohol often first facilitated sex work, and other drug use followed. All women recently (past month) drank alcohol, and 78% (n = 25) reported binge drinking. In addition to heroin, past month drug use included *bhang* (marijuana, 88%, n = 28), *miraa* (khat, 28%, n = 9), and non-medical use of prescription drugs (16%, n = 5). In total, 23 women reported ever injecting (72%), seven of whom injected only once (22%). In terms of heroin use, 25 (78%) reported current use, 19 of whom smoked and seven of whom smoked and injected.

Reflective of a newly emerging drug market, women had different names for the drugs they used and often interchanged the English words *heroin* and *cocaine* or used slang such as *unga* (powder or flour in Swahili) and *stuff*, all of which we interpret to be heroin based on regional drug trafficking patterns, drug descriptions, and consultation with various experts (unpublished fieldnotes). Our analysis traces women's drug use trajectories, including the social context of initiating heroin use, how heroin fits into broader patterns of poly-substance use, and the situated meanings of heroin use in sex work, all of which complicate women's drug treatment needs.

3.2. Social contexts surrounding heroin initiation

Women's initiation into heroin use was shaped by contextual factors including migration, increasing heroin availability, social networks, and sex work. Women were often first exposed to heroin when traveling to Nairobi and the coast for sex work or other economic pursuits and

continued using in Kisumu as local markets developed. Many women were introduced to heroin by other sex workers or friends and attributed their initiation to curiosity, stress, boredom, and wanting to know "how it feels." Mary, 26, smokes heroin, which she was introduced to through friends:

> "I first saw my friends taking it…. My fellow sex workers. I realized that the smell was different from…marijuana. I asked a friend of mine who later told me that it is called unga. I asked more about it and was told that it is more powerful. Instead of spending a lot of money on alcohol, you can buy it and take two or three puffs and feel high afterwards. You can then buy a bottle of beer and still remain high."

Mercy, 23, was similarly introduced through a friend:

> "I have a male friend…I went to visit him and I found him using it, I asked what it was and he said this is a drug and when you smoke it you will feel good. The first time that I tried it, I could not recognize myself. I got used to it slowly."

Most women were introduced to heroin via smoking. However, of the 23 women who ever injected heroin, seven injected it the first time but never used it again. For some women like Anne, 30, injecting was too intense and frightening. Anne initially tried heroin because she was feeling "frustrated" and had "so many things in my head." She describes her first and only experience with injecting as follows:

> "[A friend] told me, Let's go and have something that will help you forget about everything. She told me it is ok. We went to a place and she injected me, and after the injection, I forgot about everything and the thing that I felt was very dangerous…very awful. It was more awful than the thing that I was feeling before I was injected. I felt like I was dying, I was going to heaven. I became so confused. This thing was pulling me up and making me fall down at the same time… it took me so many hours to become sober."

For Anne, the intensity was too much and she returned to using alcohol and *bhang* instead, which she knew how to manage. Others injected just once while traveling to coastal Kenya and Tanzania, including Kayla, 18, who was once injected by someone while out at a bar. She wanted to try it, even though she did not know what it was.

Rather than coercion, women's narratives reflect their agency in trying heroin, which can be interpreted as particularly daring given their limited knowledge about it. Based on their experience, the majority continued using heroin, as examined below.

3.3. Patterns of poly-drug and alcohol use

Women's heroin use, including their preferred mode of administration, fit into broader patterns of poly-substance use in this emerging drug market. All women in our sample had already practiced sex work and used alcohol when they began using heroin. The majority continued using alcohol and regularly smoked cocktails containing *bhang*, tobacco, and heroin. Women reported using heroin for anywhere from a few months to several years; more recent use was common among those who initiated in Kisumu. The introduction of heroin to Kisumu represented a novel means to intensify intoxicative experiences; when heroin was unavailable or women did not have funds, less expensive options (alcohol and other drugs) filled the gap.

Women reported that heroin intensified the effects of alcohol, enabling them to drink less in public. Muna, 24, said alcohol "*mix[es] with the drug in my blood stream and makes me very high.*" Karina, 27, who mixes prescription medication with alcohol and smokes cocktails containing heroin, said that beer wastes her money because "*even up to 15 (beers), I don't feel drunk, that's why I take these other things nowadays.*"

Women made important distinctions between injecting versus smoking, explaining that injecting once does not necessitate continuing on that path. Because heroin affected individuals differently, women like Elizabeth, 22, believed that individuals had to learn to navigate their preferred modes of use:

> "Some become relaxed and calm after taking the drug. This injection is like sniffing glue. You can stand somewhere while absent-minded and won't even know when a vehicle is about to knock you down. There is that instance whereby you will just want to fight people. It will make you to talk and talk a lot. It therefore depends on the person using it."

Women who had injected heroin described it as "strong" and as having effects lasting for "days" or "weeks" at a time. In contrast, women preferred smoking because it was perceived as more manageable. Jamila, 28, was introduced to heroin via smoking. Although she subsequently tried injecting, she described it as "not friendly" to her in part because she missed her vein and developed an abscess. Only six women in our sample currently injected: Kim, 19, was the youngest and had only been injecting for three months, while others have injected for years.

3.4. Heroin use in the context of sex work

Sex work was a key factor shaping women's heroin use. Women often told us that sex work was intolerable when sober, but the intoxicative effects of heroin provided the necessary "morale" and "energy" to do it, as Jamila explained:

> "Sometimes you meet [a client] and you just hate them already, and you wonder how you want to sleep with this person. When you use drugs, you just ignore the feeling."

Women also used heroin prior to sex work for its perceived physical and social protective powers. Leyla, 27, said: *"There are times when I cannot do sex before using the drugs."* When prompted further, she owed her use to both social and physical discomfort:

> "Because of embarrassment, when [high] you don't feel shame. Also, when you take the drugs, you get to have determination and you do not feel pain during sex. If you do sex with this man, you will not feel pain and if you do it again with another man, you still will not feel pain."

Similarly, women spoke of drugs giving them "courage" to ask for fair prices and demand condom use, and "strength" to contend with the ever-present potential for sexual assault:

> "You can't do this job when you are sober because sometimes you might encounter a tough man who wants to physically abuse you, so if you are not equally tough then you may not be able to negotiate with him. But if you are equally tough you can reach an agreement easily because you are not just sober, there is a substance controlling you." – Yasmin, 31

> "When I use it [heroin], I can really talk. Right now there are things that I cannot say but when I smoke it I become aggressive and I can exchange words with a rude person. I also get ready for fights in case someone is ready for one." - Malia, 31

Women balanced these perceived benefits with other social risks. Women did not want children, family members, or clients to know about their drug use and thus developed strategies to hide their use, such as injecting in hidden places on their bodies and using privately with other sex workers or at home prior to going out:

> "Some men don't like women who smoke [cocktails]. This would make some men reject you. So you have to smoke early then you can chew gum when with him." – Malia

Women's clandestine heroin use also buffered against legal risks, as explained by Zulema, age 28:

> "I just don't want to use it [at work]. You may use it and may not

even know if you are talking to a policeman or what kind of person … So when you go out, just be decent. Drugs are used in the morning in our own privacy. When you put that in the open it can bring you problems."

A small number of women did *not* use heroin prior to sex work because they perceived it to be stronger than other drugs and alcohol. These women said heroin added additional risk to an already risky job and "*someone can take advantage of you.*" Idi, 27, only used heroin after work:

"I don't like using [drugs] whenever I am going to [do sex work] … I can [have] an accident there, as in I might be raped because these are drugs used to get high. I will therefore work for money before coming back home to smoke these things…It is all about relaxing. It is just like someone taking beer. That is how someone like me gets to chill."

Importantly, avoiding heroin use before sex work did not imply that women worked while sober. Instead, alcohol combined with other drugs helped women engage in sex work while managing their level of intoxication. Susan, 25, described using *bhang* and alcohol before work and using "cocaine" after work. She had a bad experience in the past, and some of her fellow sex workers took her home one night after a client complained that he could not have sex with her. Now she only uses hard drugs at home:

"Because the cocaine drives me faster, I decided to use it when relaxing in my house because if you use it while at work, you can forget about yourself. Some people will even have sex with you without a condom because it makes you very high."

Taken together, women's narratives suggest that sex work is a key factor sustaining heroin and other drug and alcohol use that both manages and creates new health and social risks.

4. Discussion

Globally, sex workers experience overlapping health and social harms and forms of exclusion that contribute to substance use (Scorgie et al., 2013; Shannon et al., 2015). Our study offers theoretical insight into women's rationales for drug use in contexts of sexual risk and extreme disadvantage. Findings can guide health programming in Kisumu but have applicability for sex workers in other emerging drug markets and contexts of sociopolitical marginalization.

In Kisumu, sex work and drug use should be understood as a microcosm of the rapid social transformations amidst lagging inequalities that mark many African economies in transition. Women remain especially marginalized and continue to face economic and social constraints linked to poverty, limited education, and domestic expectations (Yotebieng et al., 2016). Sex work provides a livelihood for women with limited options but invites competing physical, social, and legal risks including HIV/STIs, sexual and physical assault, human rights violations, and social stigma (Decker et al., 2015; Shannon et al., 2015). Within this context, drug use forms a strategy to manage uncertain working conditions: in our study, most women perceived heroin to engender "morale" for engaging in a risky and unpleasant job, "courage" to negotiate for fair prices and condom use, and "strength" to fight potentially abusive clients, all behaviors outside of gendered norms to acquiesce to men. Other women used alcohol and other drugs during work for similar encouragement but preferred to use heroin to relax after the stress of sex work. The situated logics of sex workers' drug use in rights-constrained contexts of disadvantage deserves closer attention.

Beyond dichotomous categories of "victims or emancipated consumers" (Mayock et al., 2015), our work contributes to scholarship on the under-recognized agency of women who use drugs in contexts of extraordinary risk (Dixon et al., 2015). We conceptualize women's heroin use as producing a form of "paradoxical autonomy" (Valdez et al., 2000) that enables women to support themselves and their dependents in ways that do not simply reproduce social dependency on men but rather generate new forms of autonomy. However, rather than a "celebration" of feminist empowerment, this autonomy is paradoxical because it is "a continuing result of the struggle for survival, not the outcome of overcoming victimization" (Valdez et al., 2000:4). Thus, while heroin use represents a creative adaptation to the multiple constraints shaping women's lives, it also exacerbates their vulnerabilities and complicates their health service needs.

4.1. Implications for drug treatment

Our findings have practical implications for drug treatment and health programming. Returning to the concept of "addiction trajectories" (Raikhel and Garriott, 2013), our analysis opens up several points of intervention. From a prevention standpoint, factual educational campaigns on drugs are warranted, as women often experimented with heroin with limited information about its potentially devastating effects. Women subsequently adopted practices of injecting or smoking cocktails based on information from their networks and personal experiences. In contrast to literature linking pleasure with transitions from smoking to injecting (Guise et al., 2017), women in our sample largely avoided the intensity of injection, and several had negative experiences. Harm reduction campaigns could incorporate women's personal experiences into messaging to discourage injection initiation. In contrast, most women preferred to smoke heroin and continued using alcohol and other drugs, suggesting that treatment strategies beyond MAT addressing poly-drug and alcohol use may be more appropriate for some women.

From a programmatic standpoint, sex worker-specific services are needed to address women's complex treatment needs and overlapping sexual risk (Wechsberg et al., 2009). Such programs must consider sex worker's agency and forms of resiliency within contexts of disadvantage (Choudhury et al., 2018). Given that women often work to support dependents, family-centered treatment approaches should be part of building resilience (Bazzi et al., 2016). As a broader goal, structural initiatives are needed to transform the educational, economic, and social factors that drive sex work and make substance use an attractive option for women in the first place (Shannon et al., 2015).

All such initiatives should consider the paradoxical agency and vulnerability created by women's heroin use. We suggest that programs seriously explore women's positive perceptions of heroin use (e.g., courage, morale) and help support genuine autonomy and resiliency in other aspects of their lives. Doing so will require moving beyond existing gender structures toward "gender transformative" approaches that recognize women's autonomy and create change through a transformation of gender norms and dynamics to promote equity and empower women (Pederson et al., 2015). Such efforts will require rigorous evaluation using measures such as the "Gender Equality Continuum Tool" that provides evaluative program criteria (Interagency Gender Working Group, nd).

Our study has limitations. The confusion over women's terms to describe drugs reflects the emergent nature of the drug market, and we have written about its symbolism (Syvertsen et al., 2016). As a counterpoint, all self-reported data are biased, and future studies could include biological or chemical tests to validate drug use data. The MAT clinic had also not yet opened when we interviewed women, so they lacked direct experience with those services.

Nevertheless, our results echo global research on the complexity of women's drug treatment needs (El-Bassel and Strathdee, 2015). Understanding interlinked patterns of heroin and other drug use in contexts of sex work is critical to informing appropriate responses. Gender transformative programming should move beyond paradoxical autonomy to create true opportunities for women to overcome drug use.

Conflict of interest

No conflict declared.

Role of the funding source

None.

Contributors

JLS conceived of the study, collected and analyzed the data, and wrote the initial draft of the manuscript; KA, SO, and ARB helped write, edit, and revise the final version of the manuscript. All authors contributed to and approved of the final version of the manuscript.

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