The Process of Injection Drug Use Among Homeless Women:A Qualitative Study

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Research

Keywords: women who use injection drugs, WUID, drug use practices, mortality rates

Posted Date: April 9th, 2020

DOI: https://doi.org/10.21203/rs.3.rs-20519/v1

Abstract

Background: The literature on women who use injection drugs (WUID) is antiquated and diluted by data from men. Due to the higher rates of morbidity and mortality among WUID, we undertook a qualitative study to better understand their drug use practices.

Methods: We adopted a Deleuzo-Guattarian lens and engaged in semi-structured interviews with 35 women. Data were analyzed applied thematic analysis.

Results: We divided these themes into (1) how WUID obtain resources to acquire drug, and (2) the steps involved in preparing, using, and discarding drugs. From our Deleuzo-Guattarian perspective, these findings highlighted that participants stratified their worlds according to rules of cleanliness to create hierarchies of appropriateness and acceptability.

Conclusions: These findings, overall, highlight the importance of understanding the constructed world of women who use injection drugs, particularly regarding the ways by which nurses interact with these women to provide care.

Introduction

Uniquely poor health among women who use injection drugs (WUID) is well documented. Spittal et al. (2006) estimated that mortality rates for WUID in British Columbia were 50% higher than for the general population, and another Canadian study found higher than average rates of mortality among WUID (Hayashi et al., 2016). Studies of homeless women (Cheung & Hwang, 2004), as well, found that, compared to the general population, women < 45 years had a 5–34 times greater mortality rate. In their review, Elzey et al. (2016) found that women were also more likely to be hospitalized for opioid overdoses than men. Hayashi et al. (2016) found that WUID were more likely to die of homicide, reflecting the violence that permeates their lives.

As part of our overarching goals to improve healthcare for WUID, we undertook an ethnographic study that focused on understanding the daily routines of these women. We sought to comprehend WUIDs' social norms to know how healthcare could be tailored. That is, our goals were not to force WUID into care, but to appreciate how healthcare could be tailored to suit the lives and needs of WUID. Furthermore, because much of the extant literature about persons who use injection drugs homogenizes males and females, effacing the norms specific to women, we sought to only involve this group in our research. The outcome is a detailed understanding of these women. In this paper, we report on the qualitative interviews from this larger ethnographic study, specifically detailing the many steps involved in obtaining and using drugs.

Theoretical Framework

We approached this study using the work of Deleuze and Guattari (2000), specifically their concepts of rhizome, assemblages, stratifications, and smooth/striated space. To explain, the foundation of Deleuze and Guattari's concepts was a rejection of inherent or essential hierarchies, and instead a belief that the world is a dense array of mutable and perpetually changing connections that are without hierarchy or rank. Deleuze and Guattari entitled this concept the rhizome and contrasted it with what they posited occurs in society: the clustering and ranking of connections (i.e., the production of assemblages). Assemblages, more specifically, are identified connections that are labelled and, oftentimes, reified as preceding the labels applied to them. Continuing Deleuze and Guattari's logic, the process of clustering and ranking creates stratifications – seemingly concrete and/or inherent connections that take the form of social norms and customs. For Deleuze and Guattari, this takes otherwise smooth space and striates it, creating concepts, ideas, norms, and customs. Herein, these concepts guided data collection and analysis, in that we used interviews not to discover fundamental truths about a specific culture, but as a means to explore assemblages and see how an infinite number of connections had been stratified to produce particular assemblages that came to structure the culture we were studying.

Methodology

Inclusion Criteria

To participate in this study, persons had to identify as female, be > 18 years old, homeless, and needed to have used intravenous drugs in the last month and for > 6 months. Homelessness was defined as living in a rooming house, on the street, in a shelter or transitional house, or "couch surfing", the latter referring to sleeping in someone else's home. The drug used by the participant had to be illicit, or a prescribed oral, injectable, or transdermal drug used intravenously.

Recruitment

Recruitment occurred through posters and business cards and referrals by participants. Posters were affixed at two women's shelters, three shelter healthcare programs, and a primary care clinic. Three health centres and a harm reduction program van, as well as two drop-ins and the office of an advocacy group for people who use drugs also displayed the posters and offered interview space. The poster listed the study inclusion criteria, expectations, reimbursement, and contact details in the form of a telephone number, email, and street address. Women who were interested in participating were asked to contact the researcher.

Recruitment and interviews continued until data saturation. Support for data saturation as a means of determining sample size has been discussed by many writers (Francis et al., 2010; Guest et al., 2006; Malterud et al., 2016; Sandelowski, 1995). Polit and Beck stated that data collection should continue until "a sense of closure is attained because new data yield redundant information" (2012, p. 742). That is, data saturation is reached when new codes (a) fail to appear in subsequent interviews and (b) are found to be present in previous interviews and already accounted for. This metric was selected as the means to determine when interviewing would end.

Data Collection

Interviews were face-to-face and took place at participants' convenience in a private room in one of several locations. During the interviews, content was covered without adherence to a rigid format. This semi-structured approach allowed women to talk about issues they felt were important, enabling a better understanding of a typical day and insight into some of their health beliefs/concerns. The questions were open-ended and acknowledged the researcher as a learner who was curious and interested in WUIDs' lives, experiences, knowledge, and opinions. Participants' answers were explored, clarified, and pursued until an accurate understanding was achieved. Probing assisted with clarity of content and enabled thick description. However, more critical to the interview process was a non-judgemental interview style and use of active listening skills (Murchinson, 2010), which involved curiosity coupled with humility and respect.

Data Analysis

This study used an inductive method of thematic analysis, as described by Guest et al. (2012). Guest et al. developed this approach to capture the "stories and experiences voiced by study participants" (2012, p. 16), and to use these findings to solve "real-world problems" (p. 17). As the intention here was to know more about the lives and thoughts of WUID regarding health and healthcare, thematic analysis provided a structure to represent the participants' narrations.

Specifically, we read the interview transcripts multiple times to gain an understanding of the content. Data analysis then involved segmenting, which identified a single point in text, the start and end of an idea. Once identified, segments were labeled, which was the process of using one or a few of the participants' words to describe the content of each.

Once produced, labels were entered in a codebook, whereupon similarities and differences were noted. Those that were similar were clustered to produce groupings with a commonality. Each of these clusters was then assigned a code; i.e., a term that captured the common content within the clustered labels. Guest et al. (2012) suggested that the more defined codes are, the better consistency of identification in the data and the cleaner the resulting themes become. Each code, consequently, was short and descriptive to cue its intention and substance.

As codes developed, we defined and added them to the codebook. If new codes resembled existing ones, they were considered with the perspective of being (a) added to the cluster, (b) revising the current code, or (c) adding a new code. Upon determining that a code was irrelevant, it was discarded. This did not mean the finding was incorrect or not noteworthy; it simply denoted a lack of relevance to this study. The codebook was thus an ongoing iterative work ensuring thorough consideration and complete exploration of the data.

Some codes, however, did not fit the developing schema. Guest et al. (2012) highlighted that such cases – referred to as outliers – can be negative or deviant cases, with negative cases being those that refer to

a point that differs from those indicated by most participants, and deviant cases being those that follow a theme, but deviate from the main thinking of the group and extend the continuum of responses. Because outliers may provide salient information not discussed by others or may be outright irrelevant, Guest et al.'s (2012) work about the decision to include or exclude outliers was followed. Therefore, the fate of outliers was determined on an individual basis after a thorough and thoughtful review of the data and possible implications of the information within the aims and the broader context of the study. Guest et al. described that this process is important because it helps guard against "cherry picking" (2012, p. 113).

After the coding sequence was completed, including a review of outliers, codes were clustered into themes, which were titled to capture the common point in these codes. These themes were then developed into larger narratives that encompassed the broader sentiments in the participants' statements and the observation and artifact data. This completed analysis.

Results

Thirty-five women were interviewed. One woman did not want to be audio-recorded and was excluded from analysis. Three others were excluded when the review of the interview confirmed the women were housed. Thus, 31 interviews were used in the study.

The participants ranged from 27–60 years of age, with most being 40–50. The substances they used varied. It was not part of the study to ask what drugs were injecting, but this information often arose in the interview, revealing that most women used > 1 substance, with only one woman reporting use of a single drug. Seven women did not disclose what drugs they injected. Although opioid alternative therapy (OAT), such as methadone or buprenorphine, is a "drug treatment", it is only effective for replacing opioids, thus many women were prescribed OAT and continued to inject crack-cocaine. Moreover, many women discussed concurrent methadone and opioid use.

Interview Results

In analyzing our participants' data, it was clear that there were two distinct aspects to the practice of infection drug use. This first involved securing resources to buy drugs, including the activities leading up to this point, and the second included the actual steps, procedures, and rituals involved in obtaining and using the acquired drugs. We now detail these findings.

Theme 1: Securing the Resources to Obtain Drugs

The means of acquiring drugs was diverse and did not always involve the exchange of goods or cash. Trading or selling items of value or performing an activity were common ways to obtain the sources to obtain drugs. Q explained,

You try and get money for your habit. … You try to peddle drugs to support your habit or get a piece of the pie. If I do a run for somebody, he'll give me a little bit or a wash.

Q explained how difficult and varied the means to obtain drugs can be; women must be creative and endure risks. Getting “a piece of the pie” is to do an activity that involves getting drugs for someone else and, in return, receive a small amount of drug. “Doing a run” is to get drugs for another, which may involve carrying money for the purchase or the drugs, both which present the risk of robbery or arrest. If the run is successful, the runner is paid with a small amount of drug or will be given the person’s drug residue in the pot where the drug was prepared for use (a wash).

Sex work was another option, and was reported by most participants. P stated:

I sometimes work the streets to get money. I prefer doing that over stealing or anything else because, in my eyes, it’s a fair trade between two consenting adults. I don’t see anything illegal about it.

Not all participants shared P’s sentiment. Others described sex work as mundane and repetitive. U stated,

If I’m getting paid, that’s fine. Because they don’t have to touch me. … I do the work. Massage, massage, massage, flip over, you’re done, see you later, next.

Some, like U, who described no touch sex, found ways to make selling sex more palatable such as telephone sex. Other women, spoke of only doing oral sex. Moreover, some women had long-standing customers who they saw regularly. This practice was a means to increase safety, financial security, and manage expectations:

I make sure I don’t go out on the street corner and sell my soul. I have regular customers ... and they know they’re not allowed to cross boundaries. … I have six regular customers now, and it’s money every day.

These women’s boundaries made sex work more tolerable and safer considering the risks that were recognized and experienced. As O stated about the possibility of physical harm or death, “that’s sex trade work”. Their lives were often in jeopardy. ‘I’ stated:

I would spend over a $100 on injection use … every day and I would be working the streets for money. … It’s very dangerous. … If you work the streets, getting into somebody’s car you don’t know. It is stuff like that. … When you do injection use, if you’re doing morphine and stuff, you get very sick, so you have to chase it.

‘I’ described the necessity of such risk taking, which overpowered her need for safety. K likewise reported that she engaged in sex work to fulfil her need for drugs. She stated, “Prostitution … I don’t like it, but I do what I have to”. Sex work thus produced both mental and physical sequelae, but was a means to obtain the resources required to obtain drugs.

Many of the women also received a monthly welfare cheque, which afforded opportunities to buy drugs. M described this:

You have to scrimp, and save, and try to con, and everything to get your fix, and then comes the end of the month, you don’t have to do that, so it’s like, “AAhhh bonus,” and everything goes to hell.

Many women also panhandled to gain income, which some described as demeaning. Others were comfortable with the role and saw it as a legitimate and preferred means to make money. S stated:

I need at least $40–60 every day. … I go to the end of the day. That's what I do, I panhandle. I go shoot, and then after I go back and panhandle.

However, there were other means of procuring capital for drugs. Stealing also occurred, and O described how this became more likely as the need for drugs increased. While the cycle continued, certain periods (e.g., withdrawal) needed to be addressed quickly, thus driving a means to obtain capital for drugs quickly as well. She stated:

You don't want to wait, you don't check around to see what you can do, you're going to find the first thing you can sell. You know what it is? It's going to be a crime, it's a nasty situation, but that's how it ends up.

O described the means to obtain drugs as something she needed to do due to an inability to "wait." "Doing what you have to" was a phrase many women used. H stated:

You do what you have to, you just try not to get caught. So, it's part of life. … You do what you gotta do – steal, cheat, lie, work.

As part of their cycle of obtaining capital to purchase and, ultimately, fulfilling their cravings, the participants described other activities, such as selling bus tickets, collecting bottles, participating in research, doing odd jobs, lying, conning, borrowing money, selling drug injection or smoking equipment, assaulting men, and having "sugar daddies."

Drug withdrawal, however, was not the only factor that drove participants to use these other sources of income. The creativity to obtain capital was also driven by a lack of opportunity to secure employment, often due to a criminal record. E explained,

Most addicts have criminal records. They can't get a regular job because they want a police record check. So, no one's gonna hire you. ... You want to look good to an employer and you've got this criminal record of maybe theft or possession. And it doesn't get erased, it stays with you.

Regular employment, then, was not always possible as the women often had charges related to possession of drugs and sex work. The cycle of these women's daily lives included permanent criminal records, which limits them in obtaining licit employment. These brandings (while on paper) restricted job opportunities, and forced WUID to engage in alternate means to obtain capital. Although the women had many means of doing so, as discussed above, many were neither safe nor desirable, thus perpetuating the cycle of danger and crime.

Having a place to live was another means of exchange and included, for example, offering one's place for drug use, as a drug trial site for dealers, or by means of running a "crack house". U described how she would obtain drugs by allowing dealers to prepare drugs in her place:

I went completely crazy with coke. I had dealers coming to cook the coke, so I could do more. I wouldn't let them sell it in my house, but they were allowed to cook it in large amounts. … They're done, they leave, there's no conversation, I didn't know their names. ... I just knew they were coming, I set stuff up, wait, they'd tell me to test it, I'd test it, they'd go … plus they'd leave me some.

In this case, drug dealers used the woman's accommodation to prepare and organize drugs, which was how U obtained cocaine. AK similarly allowed others to use her housing to inject, with the expectation she would receive drugs for this privilege. She stated,

When I had my apartment … the girls in the neighbourhood who didn't have places, they wanted somewhere to shoot, they could come to my house and do their hit. … It is bad etiquette to go into somebody's house who uses and use and not share. You don't do that. It's frowned upon to the point that if you don't share, get the fuck out.

The culture of drug sharing is well established, with guidelines for behaviour. In the case of using in another's home, sharing is required; those not willing to participate are excluded or expelled. Similar procedures existed for the many processes involved in securing the resources to obtain drugs, which is followed by the rituals of obtaining and using these substances.

Theme 2: Obtaining and Using Drugs

The second theme encompasses how WUID (a) obtain drugs, (b) prepare to use (getting equipment, preparing drug for use, finding a place to use), (c) inject drugs (who injects, where on body injection occurs, sharing practices), and (d) handle used equipment (disposal or reuse).

First, obtaining drugs is time consuming and dangerous. Knowing who to buy from, when to buy, and how to buy are a requirement to stay safe. Knowledge of what is a good versus bad drug and drug deal is also important. AA stated:

I know what it's supposed to look like, what a gram is, what's not a gram, and if I think you are ripping me off, I'll tell you. … "Sorry you lost my business. I ain't going to you." They realize, "Well she ain't no stupid cookie; she's pretty smart."

Obtaining drugs required astute knowledge and calculation. To not squander obtained capital, WUID needed to know the size, weight, etc., of drugs. Not only did AA state that she possessed this knowledge, but also she reports that she makes her expertise known. The necessity to look after one's needs, and the required and associated highly developed skills were basic competencies in this culture and helped ensure WUID obtain a fair deal when obtaining drugs.

Buying drugs from a reliable source was also important, as both the quality and content of the drug can be life-altering. AA felt her skill as a "smart cookie" helped protect her in this regard. However, while such skills may her gauge quantity/quality and assist with ensuring others do not cheat her, it is common to find drugs that are contaminated with substances that are not easily detectable and may cause serious

bodily harm or overdose. G summarized the unpredictability and uncertainty of the content of drugs one was buying when she stated it is “luck of the draw”. Therefore, while a certain consumer prowess is required, there remains an element of chance.

The next step in using drugs is to (a) obtain equipment for injection, (b) prepare the drugs, and (c) find a place to use. For the first item, most participants visited NEPs. AI stated:

I get access to resources that I need that are consistently available for me [at the NEP], all the time. It’s safe, it’s supportive, there’s no judgement.

Overall, the women were aware of NEPs and viewed them positively. They felt NEPs provided the equipment and services they required, and did so in non-judgemental ways. AJ stated:

I drop in and I grab my needles, my equipment there. It’s confidential, you don’t have to say your name but there’s staff who know you. There’s also [van 1] that you can call. And you can call [van 2] after certain hours. … That’s where I get my stuff, and my condoms and everything like that. And they also have drop boxes. I collect my needles and put them in a bag. … I’m usually there two to three times a week.

AJ had integrated NEPs into her life, with the routine she described being common in our data. There were few negative comments, with most WUID agreeing the NEPs were satisfactory. As AK further noted, she did not share needles because of NEPs, and did not understand why others would: “There’s access all the time, everywhere and anywhere. You got a van that delivers”.

The reasons why sharing occurred, however, were raised by others. Although the women were aware of the need to use new/sterile equipment every time and not share, these activities were not always possible, and reuse occurred. O stated, in fact, that his occur commonly: “Everybody’s out there sharing”. As such, despite the accessibility of supplies, circumstances lead to sharing. According to the participants, withdrawal was a common reason, as it incites sharing without reflection on health consequences. This reality highlights that the act of sharing is not one of ignorance or a disregard of health. Rather, it is a situation of imminent need and physical distress. Exceptionally, U endorsed sharing a needle with her partner when she found she could not inject herself and required assistance: “I don’t [inject] behind anybody, except dumb ass”. This finding of “being second on the needle”, however, was restricted to this interview.

Other women reported they had previously shared drugs but no longer did so due to negative experiences. Unintentional sharing was one such situation, which occurred when people switched syringes. J and K were wary of this practice and reported it had happened to them. K advised, “Use safe equipment and be around people who are not infected when you’re using” (32–330). Bloodborne infections prevented some from sharing. Participant ‘I’ stated:

You share with people if you’re really sick. You don’t even think about it. I contracted hep C that way, but I was careful enough not contract the HIV.

Here, 'I' recounted her rationale for, and fear of, sharing. She also reported that sharing led to her contracting hepatitis C, but not HIV, although both infections are transmitted similarly; it was also not clear what care she took to prevent the latter. Other participants noted how they prevent infection. Some used bleach or boiled the needle. G described: "I have shared a needle before, but the person cleaned it with bleach … and then they boiled it." While this statement contradicts public health messaging about single use sterile equipment, it suggests that WUID used more sophisticated – albeit not necessarily effective – strategies to mitigate risk. Thus, the procurement of clean injection equipment from a NEP, while well intentioned, can be jeopardized by the others' or one's own need to use when withdrawing from or craving drugs. These strong influences can undermine efforts to avoid infection and are important considerations for public health.

The topic of preparing drugs for injection was also raised. Some learned, and others guessed, at how to prepare fentanyl patches. Despite the possibility of injecting a lethal dose (and having done so), participants continued to prepare these drugs for injection. AB stated:

I've been using fentanyl patches. … You buy a piece, put it in the water, scrape around, heat it up and suck it up. That'll work. I don't know if that's the right way, but it's been working for me and it takes away the craving and helps the pain.

Again, drug use superseded safety. AB had a history of drug use, with a period of no injecting. She was now reacquainting herself with current practices, but had not asked peers for help on how to prepare drugs. AB's discussion demonstrates the peril of injecting without full knowledge of the drug, its dose, and how to prepare it; e.g., fentanyl is unevenly distributed through the topically applied patch, which leads to an unpredictable dose in each of the "pieces."

Another example of potential harm from drug preparation related to how drugs are fixed in a cooker – which is a small spoon-like item that is heated, usually by a lighter, to dissolve drugs for injection. Two women reported using vinegar for this process, despite it being caustic to veins due to its acidity; thus, packaged Vitamin C is advised. AB indicated no one had shown her how to use Vitamin C powder, so she continued to use vinegar, as she was familiar with this process:

I just melt down crack and use whatever I melted down, it's so much easier. [I use] just vinegar. Nobody ever showed me how to use Vitamin C.

Again, a lack of knowledge is witnessed to cause potential harm. While NEPs distribute equipment, it seems there is a lack of teaching about how to prepare drugs. It was also clear that some of the NEP equipment was not suitable for changing consumption patterns. One participant noted that larger cookers, other cooking equipment, and heat sources were desirable (AK).

Preparation for injecting also included licking the needle. When a few women were asked about this practice, they agreed they did it for varying purposes, including to test the drug, taste the drug for quality, and check the integrity of the needle. One woman (J), in reference to checking for a barb on the needle by

licking it, indicated she would rather cut her tongue than ruin a vein. The issue with this approach is that there are many bacteria in the mouth which can be transferred to the blood upon injection. Severe infections can consequently arise.

Regarding drug use, the women indicated that they inject in various public and private spaces, both indoors and outdoors. Injecting outside was less desirable due to fears of public and police scrutiny, and fears of missing their veins with the needle when they attempted to inject quickly due to potential observation. W talked about being arrested when she used outside:

It's my own fault. … I know better. When you are sick, you don't have the energy to walk … you'll just sit down where you can and do it. … I tend to be more discreet, but I didn't give a shit that day. I was so sick I just wanted to do it. … I looked up … and they were right there. I was like, "Oh shit" … and the cop went, "Shit".

The place of use was mostly a matter of necessity. A few women said they would use anywhere, accurately describing where WUID in this study could be found injecting. Z described women "hiding behind [parked] cars because the [side] mirror is there, and the girls use their neck". A few women mentioned injecting in public toilets. This precarious use of space was driven by need, giving rise to potential issues of infection, damaged veins, skin wounds, arrest, and harassment.

Also warranting careful attention and skill was the act of injecting, which was something others would do for the woman or she would do herself. For those who had others inject them, common reasons were difficulty finding veins, needing to use hard-to-reach veins, or injection in the jugular. Although some women reported trusting others, most were determined to inject themselves due to potential consequences of having someone damage their veins. Healthy veins are essential for injecting drugs, relieving dope sickness and cravings, and getting high. AI stated:

The first time I used I didn't hit myself. Somebody did it for me. … There was one day, I got a pill, but I couldn't find somebody I trusted, so I had to do it myself. ... It's not like you get to practice, you just gotta do it. ... I had track marks everywhere, my hands were blue and purple and red. Now I don't even have track marks… I know how to do it.

Trial and error preceded competency in self-injection. However, the need not only to learn but also to perfect injecting was evident. Determination and self-reliance were important factors in the decision to learn the skill of injecting independently, and AI was proud of her independence.

Some of the cohort injected themselves and others, and were recognized for this skill. AE was known for such assistance and explained, "If they had used before, and they just couldn't get it, I would help them". AE, like others, had rules that guided who she would help. The caveat was that they would not inject someone if the person did not already use drugs. As T stated, "I would help them, but … I'd have to see track marks. I wouldn't want to give somebody their first needle". This practice likely existed because, in

part, the women recognized what drugs had done to their lives and did not want to be a part of taking someone else down the same path. AJ stated:

I would never wish this on my worst enemy. Addiction is an evil, evil being. I wish there was never an addiction problem. I wish there was never such a thing as crack, as cocaine, heroin, oxys, percocets, morphine or whatever you put in your arm.

AJ's statement speaks of how much the women viewed the effects of addiction. As they would not wish it on a "worst enemy," they would not inject anyone naive who had never done so before. While accepting their own drug use, they believed this was not a lifestyle that others should follow.

Regarding drug use, for the most part, women injected into their arms/hands or legs/feet. Others tried to hide injection marks by using more covert parts of their body, such as behind ears or knees, between toes, under the tongue, or in the breast, groin, or eye. AA stated: "I don't poke things in my arms. … I put it behind my ears. … I know where to go, I can feel it. … I do it behind my knees." Although a few of the women were too frightened to try injecting in the jugular vein, many had. H stated: "If I can't get it, he'll usually get me in the neck, and if he's not around then I try very hard to get it." The rationale for injecting into a neck vein varied; W explained,

Easier, bigger vein, always accessible and you get higher faster. It hits fast, because obviously it's close to your brain. Some people do it themselves, but I can't.

In short, the women injected wherever they could access. Although some were reluctant to inject in areas of the body considered risky, others chose locations that enhanced the high. Keeping their bodies free of marks and avoiding visible evidence that might invoke stigmatized remarks from others was also important, and involved hiding the places where drugs are injected. It was important for the women to avoid negative comments and being identified as WUID.

Along with injecting drugs, the women saved "washes", which are the drug residue left in a cooker after use. The women talked about not sharing their needle, but about sharing washes, as these were regarded, by the women, as low or no risk for infections. A discussion with Y, who was HIV-positive, indicated she shared washes with other HIV-positive people if "they [were] pretty clean". Although no details were given, Y acknowledged she was putting herself at risk when using the equipment and drug residue of a person infected with a BBVI. To this, Y stated,

I don't care sometimes. I know there's other strains of hep C and this and that, I don't think about that. I'm banging anyways, I don't care, add another thing to my list.

Most women who shared a wash did so to resolve withdrawal symptoms. AK explained,

I share. It's almost like an "honour among thieves". If you know somebody who's really sick and … you've got a lot of dope, you're going to give that person a wash so they're not sick, because one day when they're getting a hit, they will help you.

The wash can be traded, sold for cash, given with the intention of future payback, or given as a gift to assist someone who is suffering from withdrawal or cravings. The wash is a commodity with varying uses, and as such a prime item among WUID. The wash the participants described also gave further evidence to some of the rules of WUID. It is important to “help each other out.”

Lastly, the participants discussed equipment disposal, including hiding it and putting it down water sewers. They also described throwing needles on the ground. This was not preferred, but often the quickest and easiest way to discard evidence of drug use. O stated:

Where are all these dirty needles going? A lot of people just poke and throw. A little bit of rainwater washes them down the street. … We throw it down the drain.

The participants also reported using biohazard containers to dispose of needles, which they then returned to a NEP or community disposal bin. Z indicated she used such NEP supplies, and W stated, “I’m always sure to drop off my dirty ones in the boxes”.

From the women’s statements, the biggest deterrent to safely disposing used syringes and other equipment was the lack of conveniently and discreetly located biohazard containers. When AA spoke of carefully wrapping needles to discard them, she was asked about her use of the NEP box for disposal outside the shelter where she stayed. She stated:

You’re not going to do it right in front of here … where the police are. You’re going to do it somewhere else … wherever you can’t be seen.

Thus, getting rid of used gear was problematic, despite available biohazard containers and pick-up or drop-off services. While most women preferred using a biohazard bin, some circumstances prohibited it. This contributed to public drug use, equipment re-use, and indiscriminate discarding.

Discussion

This qualitative study about WUID identified their practices regarding obtaining and using drugs, and the ways they discard drug equipment. Such findings are important because, while the literature helps understand people who use intravenous drugs, there is more to know about WUID. Within the literature, WUID have often been studied from the perspective of having HIV or being at risk of HIV. Their lives, preferences, and experiences were often ignored, in favour of understanding these women as vectors of HIV transmission. The literature, moreover, subsumes WUID within studies involving men, leading to the norms of men and women who inject drugs being clustered into an amorphous whole. For these reasons, this study was initiated.

On such points, this study adds some nuances to the literature. For example, certain phrases are repeated in the literature, such as “being second on the needle” (Csete & CHLN, 2006) or that women are often initiated into intravenous drug use by a male sexual partner (Hser, Anglin, & McGlothin, 1987). These findings, however, were not strongly identified in our study. Perhaps geographic or regional differences, or

an evolving epoch related to women's rights and independence have led to these changes. For whatever reasons, our participants did not endorse some of the practices that have been accepted as the way WUID are and what they do.

Another noteworthy point in our study was that the women often used the words clean and dirty to denote their beliefs about their lives and circumstances. These WUID also contrasted drug use as "dirty" with aspirations to be "clean", a melding of two states that appear diametrically opposed, but which are quite interrelated. Little has been said in the literature about cleanliness and WUID. Sheard and Tompkins (2008) and Malins et al. (2006) referenced cleanliness in their studies, as did Gelberg et al. (2004), Taylor (1993), and Rosenbaum (1981). In this work, the authors spoke primarily of WUID preferring clean equipment and desiring to have unmarked skin. Like the women in our study, the use of dirty equipment was considered undesirable, and unmarked skin was important to present oneself as someone who does not inject drugs.

Deleuze and Guattari's (2000) work helps explain these findings. WUID and NEPs are part of the striated space of injection practices. In harm reduction, the unspoken message is that sterile equipment improves/saves the lives. Even though WUID are permitted, even encouraged, to access harm reduction services, they are to be obedient and counted. If WUID do not accept public health expectations about the drug-using body, i.e., to use clean equipment, they become out of place or improper in the striated space of those considered clean (Ettorre, 2004). Thus, the drug-using body is allowed into the assemblage, but only on the clinicians' terms. Those who are dirty (WUID) may enter clean spaces (clinics), if the norms of the clean space are maintained.

Cleanliness was important to the participants, regarding both equipment (using a NEP, not sharing) and the environment (using a biohazard container). These activities and behaviours assisted with presenting WUID as clean and attending to body boundaries and environmental hygiene. WUID took what they perceive as social beliefs about cleanliness and internalized them as beliefs, also enacting them so that their inside and outside align with the expectations of others (outside). Projecting the appearances they perceived was valued by others enabled them the ability to move beyond the stratifications of their marginalized social assemblages.

The woman who injects drugs, however, remains as other by violating established social stratifications to be "productive," that is be an employed, educated mother, who does not engage in illicit activities. In using drugs, WUID de-stratify themselves and become other. Healthcare providers, through NEPs for example, then re-stratify these women by having WUID use sterile equipment and by having them engage in safer injection techniques in acceptable locations. The WUID who refuse are further marginalized. They violate the social assemblages of value.

Indeed, the women spoke of always using clean injection equipment as an important element of their life and expected behaviour. They had clearly internalized the desired conduct, such that, the more WUID tried to appease these values, the more sanctions WUID would experience if they breached them. That is, as the availability and accessibility of resources to follow social dictates of cleanliness increased, so did the

admonishment for those who did not access these services. Thus, when one can not adhere to the “use clean” expectation, one might be inclined to hide deviations. This may be accomplished by providing the “right” answer to a question or proposing the “right” action and to hide any misdemeanours. The progression of the interview content evolved from “I don’t share” to “I do sometimes,” to “everyone does – more than you know”. This progression is a part of the survival WUID face each day; that is, to hide the dirty, exclaim and expose the clean, and avoid penalty, including being looked down upon, having derogatory labels attached to them, or being “red flagged” at hospitals. In other words, these women had learned to put forth images of themselves that followed social stratifications.

Sheard and Tompkins also found that their participants attempted to ensure clean needles were used, or at least reportedly used. The women in their study described the used needles of others as “dirty” (2008, p. 1542), and they viewed anyone who shared as “repugnant” (p. 1543), an acknowledgement that the message to use clean equipment had been integrated. Also aligning with the ideal of cleanliness, Vitellone (2003) wrote that the sterile syringe embodies the concepts of clean and safe, and enabled PWID to portray themselves as people who upheld social standards, notwithstanding the use of illicit substances. WUIDs’ reactions in Sheard and Tompkins’ (2008) and our study also reflected public performance and demonstrated that WUID understood clean needles were to be used. “Everything clean” was the public health phrase parroted by some. Others detailed how they not only had clean equipment for themselves, but also enabled the morality of others by distributing supplies from the NEPs to others, thus saving them from the spread of dirt and disease from used needles.

In our interviews, although WUID espoused and repeated public health messages about sterile and so-called safe injection practices, they did not always enact their words. Withdrawal from drugs and cravings made it nearly impossible to resist the need to use whatever was available. Washes, drugs, and needles were shared. Here the presented image followed the expected discourse of clean and good, which was later unveiled to be what would be considered dirty and diseased. The women discussed reusing and sharing to alleviate a need to be high and avoid withdrawal symptoms. The message to use clean was well versed, and some did not want to implicate themselves, but spoke of others who scrounged through abandoned apartments, broke into injection disposal boxes, and injected whatever remnants they could find.

The participants also reported that discarded needles were seen as dangerous and disgusting. Biohazard bins from the public health unit were available to ensure the capture and containment of dirt and disease. The women endorsed these bins and explained that discarding needles and used equipment outside these bins was unacceptable. This discussion illustrates the point that people who use biohazard containers are responsible, versus the undesired so-called junkie who recklessly disposes of needles and cares little for public safety and cleanliness (Moore, 2009). However, the women also described that bin placement affected use. Attempts at cleanliness were thwarted, as the means of disposal were provided by neoliberal thinkers who engaged in harm reduction through their (often of privilege) lens, without considering the needs (to avoid detection or arrest) and desires of WUID (to follow public health

suggestions), nor taking direction from them regarding how a biohazard bin can be transformed to better suit their needs.

Another unforeseen outcome of these neoliberal solutions was that our participants were reluctant to carry even the smallest biohazard containers, as these would identity injection drug use. The bin became the signifier of abhorrent behaviour accompanying the marked and diseased (stratified) body that the participants attempted to hide. The consequential – and unsurprising –action was to toss the used needle, as this requires little time and can assist with avoiding the attention of others, including the police. Also, when the priority is on identifying how drugs will be obtained, sanitation ranks low. That is, while clean is desired (verbally at least), actions that could be identified as dirty take priority in a situation where drugs are needed.

Malins (2004a, 2004b) also noted this ideal of cleanliness, or rather the association with dirt that accompanies injection drugs in a downtown environment, where many people injected. Malins et al.'s (2006) study provided an example of WUID who altered their environment by cleaning it up by using a garbage bucket in the area. The WUID in this study (Malins et al., 2006) sought to maintain cleanliness so the area where they used drugs would remain open to them. They hoped others would not object to the use of the site for drug use if the area was kept clean and that they would blend in with the downtown business district more readily.

A review of the use of clean and dirty in the extant literature and the current study reveals that the concepts are determinations of subjectivity. The concepts separate WUID from others and delineate what is acceptable practice within drug use. It is also evident WUID have absorbed and internalized public health messages but are unable to fully enact the idealized mainstream measures of infectious disease prevention and thus of following and abiding by social norms of cleanliness. The limitations to apply self-care measures, within a disempowered and vulnerable population, are evident (Epele, 2002b). Clearly, dirty is viewed as bad and clean is associated with morality, goodness, and purity. Attempts to emulate the desired attributes are frustrated by experiences of being marginalized and complicated by acts of resistance. While the predominant hegemony calls for self-discipline and control, WUID are disenfranchised and not provided with the opportunities or tools to explore what could work contextually to assist with their needs.

Our results, however, must be viewed in light of certain limitations. Namely, our data arose from a convenience sample of WUID in a single urban Canadian city with a population of 1 million, where there are readily available harm reduction services in the main core of the city. The findings were also based on self-report, and thus include all related shortcomings, such as that our participants were likely reporting findings that fit what they perceived the researchers wanted to hear. This finding might have been more notable due to the sensitive topic of our study.

Notwithstanding these limitations, our findings highlight key aspects about injection drug use among women. They showed that certain practices previously thought to be common, such as being second on the needle, may not be as common as previously thought. They also highlighted limitations to biohazard

deposit bins, and how safe discarding could be restructured. Lastly, and most importantly, these findings detail the exact processes involved in the lives of WUID as they, first, obtain the resources to obtain drugs, and, second, go though the many steps related to acquiring drugs, using them, and discarding equipment. As was our stated objective, this information can be used by nurses who engage in frontline practice and policy work to make real-world changes for a group of women whose lives are difficult and dangerous. Indeed, using this information to tailor healthcare for these women and the stratifications and assemblages that make up their lives may be an important next step in providing good, safe, ethical nursing care.

Abbreviations

HIV
human immunodeficiency virus
NEP
needle exchange program
WUID
women who use injection drugs

Declarations

- Ethics approval and consent to participate: yes (University of Ottawa Research Ethics Board)
- Consent for publication: yes (signed explicit consent from each participant)
- Availability of data and material: none
- Competing interests: none
- Funding: none
- Authors' contributions: both authors contributed to this paper
- Acknowledgements: none

References

1. Armstrong D. Bodies of knowledge/Knowledge of bodies. In: Jones C, Porter R, editors. Reassessing Foucault: power, medicine and the body. London: Routledge; 1994. pp. 17–27.
2. Boyd J, Boyd S. Women’s activism in a drug user union in the Downtown Eastside. Issues in Criminal Social Restorative Justice. 2014;17(3):313–25. .
3. Boyd S. From witches to crack moms: Women, drug law, and policy. Durham: Carolina Academic Press; 2004.
4. Boyd SC, Marcellus L, editors. With child. Substance use in pregnancy: A women-centred approach. Halifax: Fernwood; 2007.

5. Cameron P, Willis K, Crack G. Education for change in a post-modern world: Redefining revolution. Nurse Educ Today. 1995;15(5):336–40.
6. Cheung AM, Hwang SW. (2004). Risk of death among homeless women: A cohort study and review of the literature. Can Med Assoc J, 170(8), 1243–7. .
7. Legal Network
Csete J, Canadian HIV/AIDS. Legal Network. (2006, August). *Second on the needle: Two-level strategy for claiming the rights of women who use drugs*. Paper presented at the VVI International AIDS Conference, Toronto, ON. Retrieved from .
8. Davis DL, Walker K. Re-discovering the material body in midwifery through an exploration of theories of embodiment. Midwifery. 2010;26(4):457–62. .
9. Deleuze G, Guattari F. (2000). A thousand plateaus: Capitalism and schizophrenia (B. Massumi, Trans.). Minneapolis: University of Minnesota Press. (Original work published 1980).
10. Douglas M. Purity and danger: An analysis of the concepts of pollution and taboo. London: Ark Paperbacks; 1985. (Original work published 1966).
11. Dougals M, Wildavsky A. Risk and culture: An essay on the selection of technological and environmental dangers. Berkeley: University of California; 1983.
12. Elzey MJ, Barden SM, Edwards ES. (2016). Patient characteristics and outcomes in unintentional, non-fatal prescription opioid overdoses: A systematic review. *Pain Physician, 19*, 215–228. Retrieved from &vol=19&page=215.
13. Epele ME. Gender, violence and HIV: Women's survival in the streets. Cult Med Psychiatry. 2002a;26(1):33–54. .
14. Epele ME. Scars, harm and pain: About being injected among drug using Latina women. Journal of Ethnicity in Substance Abuse. 2002b;1(1):47–69. .
15. Ettorre E. Revisioning women and drug use: Gender sensitivity, embodiment and reducing harm. Int J Drug Policy. 2004;15(5–6):327–35. .
16. Ettorre E. Revisioning women and drug use: Gender, power and the body. Hampshire: Palgrave Macmillan; 2007.
17. Fitzgerald JL. Drug photography and harm reduction: Reading John Ranard. Int J Drug Policy. 2002;13(5):369–85. .
18. Foucault M. *Power/knowledge: Selected interviews & other writings*. C. In: Gordon, editor. (C, Gordon L, Marshall J, Mepham, Soper K. Trans.). New York: Pantheon; 1980. (Original work published 1972).
19. Foucault M. (1988). The care of the self: Volume 3 of the history of sexuality. (R. Hurley, Trans.). New York: Vintage Books. (Original work published 1986).
20. Foucault M. (1990). The history of sexuality. Vol 1: An introduction. (Hurley R. Trans.). New York: Vintage. (Original work published 1976).
21. Foucault M. (1995). *Discipline & punish: The birth of the prison*. (A. M. Sheridan, Trans.). New York, NY: Vintage. (Original work published 1975).

22. Foucault M. (2010a). *The archeology of knowledge and the discourse on language*. (A. M. Sheridan, Trans.). New York, NY: Vintage Books. (Original work published 1969 & 1971).
23. Foucault M. (2010b). *The birth of the clinic*. (A. M. Sheridan, Trans.). London, United Kingdom: Routledge. (Original work published 1963).
24. Francis JJ, Johnston M, Robertson C, Glidewell L, Entwistle V, Eccles MP, Grimshaw JM. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. Psychology Health. 2010;25(10):1229–45. .
25. Gelberg L, Browner CH, Lejano E, Arangua L. Access to women's health care: A qualitative study of barriers perceived by homeless women. Women Health. 2004;40(2):87–100. .
26. Goffman E. Stigma: Notes on the management of spoiled identity. New York: Simon & Schuster; 1986. (Original work published 1963).
27. Guest G, Bunce A, Johnson L. How many interviews is enough? An experiment with data saturation and variability. Field Methods. 2006;18(1):59–81. .
28. Guest G, MacQueen KM, Namey EE. Applied thematic analysis. Thousand Oaks: Sage; 2012.
29. Hayashi K, Dong H, Marshall BD, l., Milloy M, Montaner JSG, Wood E, Kerr T. Sex-based differences in rates, causes, and predictors of death among injection drug users in Vancouver, Canada. Am J Epidemiol. 2016;183(6):544–52. .
30. Holmes D, Murray SJ, Perron A, Rail G. Deconstructing the evidence-based discourse in health sciences: Truth, power and fascism. International Journal of Evidenced-Based Healthcare. 2006a;4(3):180–6.
31. Hser YI, Anglin MD, McGlothlin WH. Sex differences in addict careers. 1. Initiation of use. The American Journal of Drug Alcohol Abuse. 1987;13(1–2):33–57. .
32. Hser YI, Kagihara J, Huang S, Evans E, Messina N. Mortality among substance-using mothers in California: A 10-year prospective study. Addiction. 2012;107(1):215–22. .
33. Malins P. Body-space assemblages and folds: Theorizing the relationship between injecting drug user bodies and urban space. Continuum: Journal of Media Cultural Studies. 2004a;18(4):483–95. .
34. Malins P. (2004b). Machinic assemblages: Deleuze, Guattari and an ethico aesthetics of drug use. *Janus head, 7*(1), 84–104. Retrieved from .
35. Malins P. City folds: Injecting drug use and urban space. In: Hickey-Moody A, Malins P, editors. Deleuzian encounters: Studies in contemporary social issues. New York: Palgrave Macmillan; 2007. pp. 151–68.
36. Malins P, Fitzgerald JL, Threadgold T. Spatial folds: The entwining of bodies, risks and city spaces for women injecting drug users in Melbourne's central business district. Gender Place Culture. 2006;13(5):509–27. .
37. Malterud K, Sierma VD, Guassora AD. Sample size in qualitative interview studies: Guided by information power. Qual Health Res. 2016;26(13):1753–60. .

38. Moore D. “Workers,” “clients” and the struggle over needs: Understanding encounters between service providers and injecting drug users in an Australian city. Soc Sci Med. 2009;68(6):1161–8. .
39. Murchinson JM. Ethnography essentials: Designing, conducting, and presenting your research. San Francisco: Jossey-Bass; 2010.
40. Polit DF, Beck CT. Nursing research: Generating and assessing evidence for nursing practice. 9th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins; 2012.
41. Rosenbaum M. Women on heroin. New Brunswick: Rutgers University Press; 1981.
42. Sandelowski M. Sample size in qualitative research. Res Nurs Health. 1995;18(2):179–83.
43. Sheard L, Tompkins C. Contradictions and misperceptions: An exploration of injecting practice, cleanliness, risk, and partnership in the lives of women drug users. Qual Health Res. 2008;18(11):1536–47.
44. Spittal PM, Hogg RS, Li K, Craib KJ, Recsky M, Johnston C,.. . Wood E. Drastic elevation in mortality among female injection drug users in a Canadian setting. AIDS Care: Psychological Socio-medical Aspects of AIDS/HIV. 2006;18(2):101–8. .
45. Taylor A. Woman drug users: An ethnography of a female injecting community. Oxford: Clarendon; 1993.
46. Ti L, Ti L. Leaving the hospital against medical advice among people who use illicit drugs: A systematic review. Am J Public Health. 2015;105(12):e53–9.
47. Vitellone N. The syringe as a prosthetic. Body Society. 2003;9(3):37–52.