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Women's utilization of housing-based overdose prevention sites in Vancouver, Canada: An ethnographic study

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Abstract

Background: In response to a fentanyl-driven overdose crisis, low-threshold supervised consumption sites, termed overdose prevention sites (OPS), have been rapidly implemented in Vancouver, Canada. Since approximately 88% of fatal overdoses in the province occur indoors, OPS have been integrated into select non-profit-operated single room accommodations (SRA) housing. We examined the social-structural features of these housing-based OPS (HOPS) on women's overdose risk.

Methods: Ethnographic research was conducted from May 2017 to December 2018 in Vancouver. Data included 35 in-depth interviews with women who use drugs living in SRAs and approximately 100 hours of observational fieldwork in SRAs and surrounding areas. Data were analyzed using an intersectional risk environment approach, with attention to equity and violence.

Findings: Findings demonstrate that the social and structural environments of HOPS created barriers for women to access these interventions, resulting in an increased overdose risk. Primary barriers included uncertainty as to who else was accessing HOPS, rules prohibiting smoking, and a lack of trust in staff's abilities to effectively respond to an overdose. Most participants considered HOPS to be unsafe environments, and expressed fear of violence from residents and/or guests. The perceived risk of violence was informed by previous experiences of assault and the witnessing of

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violence. Many participants thus consumed drugs alone in their rooms to better control their safety, despite heightened overdose risk. Further, most participants did not perceive themselves to be at risk of an overdose due to drug use practices and tolerance levels, and viewed using alone as a safer option than HOPS.

Conclusion: Findings highlight how the low-barrier design and operation of HOPS can undermine women's engagement with HOPS. Overdose prevention strategies in SRAs should also include gender-specific models (e.g. women-only HOPS, women peer workers) to help mitigate barriers to these services within the context of the current overdose crisis.

Keywords

women; harm reduction; overdose crisis; Canada; low-income housing

INTRODUCTION

In recent years, there has been a dramatic escalation in the number of fentanyl-related overdose deaths across North America (O'Donnell et al., 2017; Special Advisory Committee on the Epidemic of Opioid Overdoses, 2019). Spurred by illicitly manufactured fentanyl and related analogues, and their entrance into the illicit drug supply, overdose deaths are now one of the leading causes of preventable deaths in Canada and the US (BC Coroners Service, 2019; O'Donnell et al., 2017). However, media coverage of overdose has primarily positioned the current epidemic in ways that obfuscates the multidimensional nature of the crisis. Designations of a 'suburban epidemic' (Hansen, 2017), a 'men's health crisis' (Berman, 2017; Todd, 2017), and a focus on 'whiteness' (Netherland and Hansen, 2016; Shihipar, 2019) have actively reframed the overdose crisis in ways that overlooks the differential effects of the changing drug landscape on women, particularly poor, racialized and marginalized women, and gender diverse persons (Boyd et al., 2018; Collins et al., 2019a; Hansen, 2017; Knight, 2017).

Extensive research has illustrated how drug-related outcomes are gendered, racialized, and classed, rendering particular populations at more risk for harm (Bourgois and Schonberg, 2009; Maher, 1997; Zahnow et al., 2018). For gender diverse persons and women who use drugs (WWUD), factors such as housing instability (Collins et al., 2018; Knight et al., 2014), loss of child custody (Boyd, 2019), gender power differentials in drug scene settings (e.g. being injected by male partner) (El-Bassel et al., 2014; Fraser, 2013; Iversen et al., 2015), and stigma (Lyons et al., 2015; Pinkham and Malinowska-Sempruch, 2008) can contribute to gendered differences in drug use experiences and increase vulnerability to adverse outcomes (e.g. violence, accidental overdose) (Braitstein et al., 2003; El-Bassel et al., 2014; Pinkham et al., 2012; Shannon et al., 2008a). However, for poor, racialized women and gender diverse persons, these factors still further contribute to disproportionate levels of harms (Boyd, 2015; Campbell and Herzberg, 2017; Craib et al., 2003; Lyons et al., 2015; Maher, 1997; Pearce et al., 2015). Because of these cumulative and intersecting dynamics, women and men's experiences of drug use are considerably different (Boyd, 2015; Craib et al., 2003; Hansen, 2017; Iversen et al., 2015; Spittal et al., 2002). As such, there is a need to assess how WWUD experience the overdose crisis in relation to their varied social locations (e.g. ability, race, socioeconomic status).

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In the province of British Columbia (BC), Canada, the overdose crisis was declared a public health emergency in 2016. Since then, there have been more than 4,500 fatal overdoses in BC, with approximately 20% of these experienced by women (BC Coroners Service, 2019). However, the province's overdose crisis is racialized and gendered, with Indigenous persons –and more specifically, Indigenous women– overrepresented (First Nations Health Authority, 2019, 2017). Among Indigenous persons, Indigenous women made up approximately 39% of fatal overdoses in 2018, while non-Indigenous women comprise only 17% of overdose deaths among non-Indigenous persons (First Nations Health Authority, 2019). Further, Indigenous women are eight times more likely to experience a non-fatal overdoses and five times more likely to experience a fatal overdose than non-Indigenous women in the province (First Nations Health Authority, 2017). As the overdose crisis is inextricably linked with social-structural factors such as colonialism, racism, gender inequities, and poverty (Dasgupta et al., 2018; Marshall, 2015; Saloner et al., 2018), it further renders low-income WWUD more at risk of harm.

Vancouver, BC has been at the forefront of implementing overdose-related interventions to address BC's overdose crisis. Since December 2016, overdose prevention sites (OPS) have been rapidly implemented into existing or provisional facilities as a temporary public health measure to address the overdose epidemic (Boyd et al., 2018). OPS are low-threshold drug consumption sites in which people can inject –or, in some cases, smoke— drugs under the supervision of peer workers (i.e. people who use(d) drugs trained in overdose response) and other professionals trained to respond in the event of an overdose (e.g. administer naloxone and/or oxygen, contact emergency medical services). The majority of OPS are located in the Downtown Eastside neighbourhood – an area characterized by a high concentration of poverty, concentration of private and non-profit low-income housing, and one of the epicentres of North America's overdose crisis. However, approximately 88% of fatal overdoses in the province occur in housing environments, with residents of single room accommodations (SRA) housing (i.e. privately- or non-profit-operated buildings providing single rooms for rent with shared washrooms and, at times, kitchen facilities) disproportionately impacted (BC Coroners Service, 2019).

To address overdose deaths in SRAs, OPS have been integrated into approximately 25 non-profit-operated buildings in Vancouver since December 2016 as part of a comprehensive provincial strategy to address the overdose crisis (British Columbia Ministry of Mental Health and Addictions, 2019; Vancouver Coastal Health, 2018a). These housing-based OPS (HOPS) were implemented in partnership with four non-profit housing agencies, with SRAs prioritized based on number of overdose deaths (Vancouver Coastal Health, 2018a). HOPS are supported by the health authority, who provides protocols for operation, training for building staff, and supplies (Vancouver Coastal Health, 2018b). These interventions are spaces located inside SRAs that can be accessed to obtain harm reduction supplies and inject drugs and by tenants and guests, with naloxone accessible throughout the building (e.g. emergency naloxone boxes in hallways, at front desk) (Vancouver Coastal Health, 2018a). Thus far, no HOPS are reported to provide space for inhalation (Vancouver Coastal Health, 2018b). HOPS vary in design and operational context (e.g. staff or tenant monitored, self-initiated monitoring), with housing providers tailoring the interventions to meet the needs of residents (Vancouver Coastal Health, 2018b).

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Previous research has examined how social and structural factors (e.g. violence against women, racism, poverty) can reconfigure space in ways that influence women's engagement with harm reduction services (Boyd et al., 2018; Fairbairn et al., 2008; McNeil et al., 2014a; Shannon et al., 2008b). For example, research has detailed how supervised consumption sites can provide space for women to assert agency over their drug use as these services minimize experiences of violence (Fairbairn et al., 2008). More recently, however, research has demonstrated how OPS are gendered spaces, with WWUD often subject to harassment by men (Boyd et al., 2018). Despite such interpersonal dynamics, OPS were still described as safer drug use environments than public spaces (e.g. alleys, washrooms) as they minimized risk of predatory violence (Boyd et al., 2018). Building on this research, we turn to overdose prevention interventions located within SRAs to develop an understanding of how women engage with these services. In particular, we aim to fill a critical gap in the literature by focusing on the role of housing in shaping or mitigating overdose risk and the various factors that contribute to people using alone. To date, no research has examined the utilization of HOPS amongst WWUD living in SRAs. Examining the impact of these interventions on overdose risk amongst WWUD is important for minimizing health inequities for this population.

In this paper, we interpret the physical space of HOPS to draw attention to the active ways in which HOPS make and remake drug use realities among WWUD within the context of an overdose crisis. Here, HOPS are located within the intersectional risk environment of WWUD (Collins et al., 2019b). The intersectional risk environment is a type of situational assemblage comprised of processes, environments (e.g. political, social, economic, physical), objects, and places which produce diverse health outcomes on the basis of an individual's social location (e.g. ability, gender, race) within particular socio-historical and geographic contexts (see Collins et al., 2019b for a more complete discussion of this approach). Examining HOPS as an object located within the intersectional risk environment is critical for better understanding factors that contribute to overdose vulnerability amongst WWUD, and in particular, social, structural, and environmental factors that influence drug use patterns. By focusing on women, we aim to foreground the complex ways in which they experience not only the overdose crisis, but also overdose-related interventions within the context of housing instability. Importantly, we seek to highlight the active ways that women interface with HOPS, and in doing so, remake their intersectional risk environments and drug-related outcomes.

METHODS

This article draws on ethnographic fieldwork conducted in Vancouver, BC from May 2017 to December 2018 to elucidate social, environmental, and structural factors that contribute to overdose risk among WWUD (transgender and two-spirit inclusive). Prominent in drug and public health research, ethnography seeks to develop a more in-depth understanding of social phenomena and lived experiences of participants through ongoing engagement (Maher, 2002). The lead author conducted approximately 100 hours of participant observation in SRA housing, drug consumption sites, and surrounding neighbourhood areas (e.g. parks, vending market) with peer outreach workers (i.e. women from the neighbourhood with lived experience of drug use), peer researchers, and participants. No

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observation was undertaken in HOPS as participants did not regularly (or ever) access the spaces, which meant that they fell outside of their daily routines and drug use environments. Additionally, the small size of HOPS made observations in these interventions inappropriate and risked deterring tenants from accessing these interventions. Fieldwork involved naturalistic observations and unstructured conversations with peer workers, WWUD, participants, and members of participants' peer networks in 1–3 hour sessions. Participants who participated in fieldwork sessions with the lead author received $30 CAD for their time. Undertaking fieldwork in these settings allowed for the nuanced observation of drug use environments of WWUD (Hesse-Biber and Leavy, 2006). Fieldnotes documenting conversations, interactions, reflections, and observations were recorded at the end of each session (Hammersley and Atkinson, 2007; Leslie et al., 2014). Drawing on the extended case method which seeks to locate everyday practices within broader social contexts to better assess experiences over time (Burawoy, 2009), fieldnotes situated observations (e.g. injecting in an alley) within social, historical, environmental, and operational contexts (e.g. drug use criminalization, housing instability) to highlight how these contributed to the intersectional risk environment of WWUD (Collins et al., 2019b).

The lead author conducted in-depth interviews with 35 participants at baseline, and at 6-month follow-up with a subset of 20 participants. Given the precariousness of housing and overlapping structural vulnerabilities, participants were lost to follow-up due to building closures, changing contact information (e.g. relocation, inactive cell phones), and lack of engagement in social services that served as the primary form of contact for several participants. Participants were recruited through fieldwork, social networks, and informational posters placed in select non-profit-operated SRAs and women-focused support services by the first author and two peer researchers. Drawing on preliminary overdose data from the health authority, ten SRAs with high overdose rates were identified for recruitment. The selected buildings included a range of SRA models, including women's-only and transitional buildings, buildings with integrated harm reduction supports, and buildings lacking support services. Of the originally selected SRAs, five were privately-operated and five were non-profit-operated. However, given the rapidly evolving housing landscape in Vancouver, with SRAs shifting from being privately-owned and operated to being operated by non-profit organizations, a third category of buildings was added to the study to capture these transitions.

We aimed to recruit five participants from each selected SRA for a total of 50 participants. Participants were eligible if they were 19 years of age or older, identified as a woman, lived in a selected SRA, and currently used drugs, with individuals who did not meet these criteria excluded. However, challenges in recruiting women from privately-operated SRAs necessitated opening our recruitment from selected buildings to any WWUD living in a privately-operated SRA. Despite these changes, only 35 women from a total of 16 SRAs at baseline were recruited to participate in the study (see Table 1). These recruitment challenges underscore the levels of social isolation and marginalization experienced by WWUD living in privately-operated SRAs.

An interview guide was used to prompt discussions on topics such as gendered impacts of the overdose crisis, housing environments, and drug use experiences. Baseline interviews

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focused on housing and drug use environments, overdose-related experiences, and engagement in harm reduction interventions, while follow-up interviews assessed changes in health, housing environments, and drug use patterns. Interviews averaged 45 minutes in length, were audio recorded, and were transcribed by a transcription service with identifying information removed to ensure confidentiality. The lead author reviewed each transcript for accuracy. All participants provided informed consent prior to their interview and received $30 CAD honoraria for each interview (Collins et al., 2017). An online pseudonym generator was used to assign each participant a pseudonym.

Fieldnotes and interview transcripts were imported into NVivo qualitative analysis software. Team members, including peer researchers, met regularly during data collection and the initial coding process, which informed baseline and follow-up coding frameworks. Data were then further analyzed by the lead author to refine themes and examine women's experiences of HOPS within a public health emergency. Follow-up data was analyzed both separately and again with baseline data to examine longitudinal changes in drug use patterns, housing experiences, work patterns, and health outcomes. An intersectional risk environment framework was used throughout the analytical process to draw attention to variegated experiences of the overdose crisis on the basis of participants' social locations (Collins et al., 2019b), with attention paid to equity and violence. This analysis draws primarily on the experiences of participants living in buildings with HOPS (n=18) so as to better understand the role of these interventions in the lives of marginally housed WWUD (e.g. living in buildings with little privacy or security of tenure). Ethical approval was received from the Research Ethics Boards of Providence Healthcare/University of British Columbia and Simon Fraser University.

FINDINGS

Over the course of the study, eight HOPS were described by participants – five at baseline and an additional three at follow-up. Five HOPS were located in non-profit-operated SRAs where participants lived (at either baseline or follow-up) and three were located in non-profit-operated SRAs where two participants temporarily stayed while unhoused. The built environments of each HOPS were similar in that they were integrated into existing spaces within SRAs, such as common rooms/lounge or rooms intended for tenants (i.e. bedroom). HOPS integrated into SRA rooms averaged 100–320 sq. ft., contained a stainless-steel sink, often a stainless-steel counter or shelves, and had no door so as to increase visibility for staff. HOPS also contained tables and chairs accommodating approximately 4–8 people, harm reduction supplies, and syringe disposal containers. One HOPS was described as also containing a couch and a large window adjacent to the front desk making it more visible to staff. Most described HOPS were located on the same floor as the building's front staffing area, with others situated on residential floors. The operational contexts of each HOPS varied and were described as being: staffed (n=2), monitored by tenant peer workers (n=2), and unstaffed (i.e. tenants use on their own and are monitored on camera or by staff check-ins) (n=4).

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Structural environment of HOPS

Rules for use—Women described uncertainty around the operational rules in HOPS, including whether or not any had rules, at both baseline and follow-up. While some participants explained that "*you can do whatever you want*" in HOPS, including sharing drugs and assisted injections, others' hesitation centered around whether smoking drugs was allowed. This uncertainty served as the primary barrier for participants who only smoked drugs, and was described as increasing their risk of fatal overdose as they had to seek out other areas to smoke in. The prohibition of smoking in HOPS, as well as in all but one OPS and supervised consumption site across the city, created an unequal access to public health interventions, and risked increasing drug-related harm for WWUD:

> I have to use in my room cause you can't smoke in there [HOPS]. Downstairs, [if you smoke] like you get in shit, like they come like crying out of their office, 'nah nah nah nah.' It's like well what do you want me to do, overdose and die in my room or something all by myself?…It's kind of stupid.
>
> ('Sally,' 30-year-old white woman)

As Sally, whose only method of consumption was inhalation, highlights, individuals who smoke remained at an increased risk of fatal overdose as the implementation of overdose prevention interventions have not included their specific needs.

This privileging of particular drug use modalities (i.e. injecting) over other forms such as smoking also exacerbated the complexities of women's lives, including their housing instability. 'Ashley,' a 27-year-old white woman who only smoked, described how her history of housing precarity prevented her from asking staff about the rules for using in the HOPS:

> We're not supposed to smoke inside, and I obviously sneak it, but I'm really, really, really – 'cause I was just homeless and it was for a long time – I'm really scared of getting kicked out. Like, really fucking scared of getting kicked out. […] And they're fine with it [i.e. drug use]. It's just I don't think you're supposed to smoke in the bedrooms cause it's smoky. […] And I think they said no smoking [in the HOPS], but I'm not 100% and I'm not about to ask. Cause then they'll be like, 'Oh, what? Are you smoking in your room then?'

For Ashley, the fear of being evicted necessitated that she used alone in her room or outside, despite recognized overdose risk, to maintain her housing. This negotiation of harm reduction and efforts to maintain housing reinforced vulnerability to fatal overdose among participants who smoked, because HOPS were not developed for multiple types of drug consumption.

Further, participants recited a long list of rules when describing a HOPS in a women-only SRA, including "*no eating, no smoking, no doctoring* [i.e. injecting someone else]," and noting that "*the door has to stay open*." 'Sherry,' a 42-year-old Indigenous, two-spirit person, continued:

> You're to notify the staff that you'll be using in the using room, you're supposed to fill out the notebook. […] But it's really good. It's better than finding somebody for

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> three, four, or five days dead in the room or something, you know, cause of the smell. Like that's reality, that happens
>
> [in SRAs].

Despite participants who lived in this building feeling as though the HOPS was beneficial in preventing overdose deaths, the highly prohibitive nature of the space was also viewed as inaccessible. For women in this SRA, such mechanisms of surveillance could reinforce their housing precarity if practices such as assisted injection were required. Notably, it was the only HOPS described as having distinct rules, with HOPS in mixed-gender buildings readily described as having "*no rules at all,"* or none that were enforced. While this may highlight better communication between staff and residents, it also illustrates how marginally-housed WWUD are made vulnerable to fatal overdose risk as their actions are controlled.

Monitoring and overdose response—As HOPS were implemented over the course of the study, surveillance mechanisms reported by participants also shifted. At follow-up, some participants explained that cameras had been recently added to their SRA's HOPS, which was viewed as critical to overdose response:

> There's a camera in the safe injection room so the staff at the desk can see if anybody drops. And there's an intercom. […] They didn't have a camera and the intercom before. That just went in in the last month or two. If somebody drops in the injection room, how were the staff going to know? So duh, they had to put a camera in.
>
> ('Lauren,' 38-year-old white woman)

Lauren positioned the camera as a positive addition because the HOPS in her building, like most described by participants, was unstaffed, with tenants using on their own. In these instances, participants explained that staff "*do an actual walk-by check of the room*," with a reported frequency ranging from 10–30 minutes; a length of time in which someone could experience a fatal overdose. Lauren continued, illustrating how staff's overdose response times were occasionally problematic despite the increased surveillance afforded by the camera:

> Their system in the office is set up on three different screens – they've always got the injection room on a screen. All they have to do is quickly glance over and there are always two staff on, or there's supposed to be. […] Some of the staff don't make it all that quickly, but I'm usually around.
>
> (Lauren, 38-year-old white woman)

Importantly, Lauren's description of staff response times underscores how in HOPS that operated without the presence of peer workers or SRA staff, tenants were often first responders in overdose events. Because of this, many participants described HOPS monitoring approaches as problematic, with gaps that served to keep risk of fatal overdose high if HOPS were utilized. While this operational context may increase comfort levels for some tenants, participants pointed to these contexts as shaping how safe they felt using these spaces.

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This gap in overdose response was reiterated by participants across multiple SRAs, and reinforced participants' reluctance to utilize HOPS. Participants described that they lacked confidence in staff or tenants' abilities to quickly and effectively respond to an overdose, which created a barrier to accessing the intervention:

> I like the overdose prevention sites better [than HOPS] because there's staff, you know what I mean? If something does happen, I feel much more confident that they're [i.e. OPS staff] gonna keep me alive than tenants in the [HOPS] or the building staff.
>
> ('Juanita,' 40-year-old multiracial woman)

Sally reiterated these sentiments, detailing how the delay in response times within unstaffed HOPS incited her distrust of SRA staff's intentions as they related to overdose response:

> I was walking by [the HOPS] and I see some girl in the nod there and she was blue. She overdosed and the staff were supposed to be watching. And if I hadn't of gone and Narcan'd her she would have died. […] And they didn't watch her and there's a camera right there. They don't do anything when you overdose in that building. They don't fucking Narcan you, they don't want to get their hands dirty…like there are people that have died in that building because of these people [i.e. staff].
>
> (30-year-old white woman)

While low-barrier, participants' experiences highlight how HOPS monitoring and response mechanisms at times did not address risk of fatal overdose as SRA staff had to juggle existing responsibilities with overdose response. Participants also positioned this risk as a consequence of gaps in staff overdose response training. As such, participants' experiences illustrate the need for additional personnel to reverse overdoses more quickly. Further, participants' uncertainty of staff's abilities was intertwined with what was described as high staff turnover in SRAs, which was likely due to the underfunding of non-profit-operated SRAs and burnout amid an overdose crisis.

Importantly, participants' differentiation between HOPS and external OPS centered around feelings of safety in OPS, from both violence and overdose, which was rooted in how these interventions were observed (e.g. constantly monitored by staff). Only one participant described having utilized a HOPS that was staff-monitored, explaining that it was the presence of the staff that made the HOPS comfortable and "*not unsafe*." This lack of continual surveillance was, however, preferred by other participants as it allowed them to procure drugs and use in HOPS simultaneously; a strategy described as "*convenient*" by participants as this was prohibited at community-based sites in the neighbourhood.

Social environment

While designed to be low-barrier, many participants considered HOPS to be unsafe environments. This 'riskiness' was in part due to the everyday violence pervasive in SRAs (Collins et al., 2018; Lazarus et al., 2011) which at times extended into HOPS and served to exclude women from these spaces. 'Donna,' a 50-year-old white woman, explained:

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> Well, there are too many people down there [in the HOPS] to begin with. And I don't want to nod off there and someone take my keys and be gone. No. [ABC: So, has that happened in the past?] Well, it happened. It does happen. It's better just to stay [in my room], so then you know when you wake up you got your dope, you got your money, you got everything, you know? You got your shoes, you know?

As highlighted by Donna, aspects of the low-barrier design (e.g. no staffing) impacted the social environment of HOPS, increasing potential theft and negative social interactions which served as a barrier. To mitigate harms, participants reported using alone in their rooms as it provided them more control over the space, as exemplified by Donna. These impediments of the low-barrier design were reiterated by participants living in two SRAs with HOPS open to anyone. This 'open' nature of HOPS was thus capable of extending the everyday violence of the drug scene into these spaces, and significantly impacted women's engagement as they were uncertain who was in the building. Juanita (40-year-old multiracial woman), who only accesses the HOPS with her partner for security, explained:

> The [building] using room, like sometimes we don't want to go down there. Like sometimes you'll just walk by to see who's in there first cause the [building] has got some bad people. […] I've seen stuff happen, which you know what I mean, makes me just be quiet and keep my head down.

Juanita's account draws attention to how potential violence in HOPS compounds violence that already occurs in many SRAs, and further gendered these spaces. As such, the low-barrier design of HOPS was perceived as suitable to the needs of men, while experienced as high-barrier to women. To manage risk of violence within their buildings and in HOPS, many participants thus chose to use in their rooms as they could better control their safety, despite heightened fatal overdose risk.

Some participants also described HOPS as "*too busy*," the resulting noise and lack of privacy in the HOPS was a barrier to use and thus, overdose prevention efforts. Sherry, a 42-year-old Indigenous, two-spirit person who lived in a women-only SRA, described how loud noises in the building made injecting more difficult:

> *Noise* [is a barrier]. *Yeah, the activity of the house – cause you can hear everything. It's not people in general, but it's the noise that's disturbing in the using room. It's allowed. So, if it's quiet, I can do it* [inject]*. If it's not, I'll go to the bathroom in my room* [and use]. *It's as simple as that*.

Importantly, participants' descriptions of HOPS as "*busy*" and "*noisy*" underscore the extent to which people in SRAs regularly accessed these interventions. Simultaneously, however, the popularity of these sites also created barriers for women given experiences of everyday violence.

Intersecting barriers to HOPS

The social, structural, and built environments of HOPS interacted in ways that created barriers for women, and reinforced their exclusion by extending challenging dynamics found in the wider drug scene setting (e.g. dearth of tailored harm reduction supports, gendered violence) to the home. To combat the omission of their needs, participants called for HOPS

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to be implemented using women-centered approaches. Participants emphasized how HOPS needed to maintain particular levels of cleanliness, aesthetics, and comfortability which they felt would make them more accessible to women. By doing so, participants' expectations of the physical environment of HOPS mirrored 'home,' and aimed to address the barriers imposed by the small size of SRA rooms. 'Lydia' (45-year-old Asian woman) explained how the HOPS in her building was "*dirty*." "*Like I couldn't imagine shoot up in it it's so dirty. I'm a clean freak, so yeah. They don't clean in there at all*." Much as for Lydia, the lack of cleanliness of HOPS was a barrier to utilization for most participants and was compounded by the popularity of the space. Participants noted how HOPS were "*always full of people*" which contributed to them staying "*a fucking mess*, [with] *garbage all over the place and blood everywhere*." While acknowledging the utility of HOPS, participants' expectations of space underscored the need for consultations with WWUD when designing harm reduction services.

Moreover, level of comfort experienced within HOPS further shaped engagement. 'Angela' (42-year-old Indigenous woman) explained that while she had accessed the HOPS several times, she did not find the space comfortable:

> They've graffiti'd the walls like so bad and it's not pretty art, pretty graffiti, they made it ugly when they did that to the walls. […] Like I've used it a couple times cause my son's at home and I want to get high and he's pissing me off 'cause he hasn't contributed shit, you know, one of those days, I go in there and I sit there and like I'll do a shot there. I think I'm okay with that because there's a camera in there. But it only picks up so much cause it's cheap.

Continuing, Angela explained that to be comfortable, the HOPS in her building needed to be more like SisterSpace, a unique women-only consumption site in Vancouver:

> [It needs to feel] *like SisterSpace. Like their little couches…you know, women like to rest. Our dogs are barking and you don't want to, you know – I think there's a touch of a woman in them* [women's only sites] *and women might just want to use them*.

Angela's desire for the space to be more like SisterSpace suggests that if HOPS provided more women-centered options, they may be better taken up by women.

Similar sentiments of more women-centered HOPS were also expressed by participants who lived in SRAs with no harm reduction supplies or services. 'Nicole,' a 39-year-old white woman who lived in a privately-operated SRA, explained the importance of women-centered harm reduction:

> I think that even in buildings that they should have, like if the women want to go in there like a women-only [using] room. Cause sure, okay, having an OPS is good but still they don't want to be in where sometimes with the men because of trauma or because of, so they need to have them, they need to have a space where they can go as well. Right? And if men want a men-only one as well type thing, right, ok, but I think that that's something.

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As Nicole described, women's experiences of trauma, in addition to the violence often experienced in SRA housing (Collins et al., 2018; Knight et al., 2014), can create potential harm and preventing women from accessing needed services.

Perceptions of overdose risk—Most participants reported limited engagement with HOPS because they did not perceive themselves to be at risk of overdose, with the majority of these participants identifying as Indigenous. Notions of 'risk' were situated within narratives of responsibility: "*Your risk of overdosing is up to you, right? Like, how much are you gonna do? Are you careful were you get your dope?"* (Juanita, 40-year-old multiracial woman). Many participants described how they viewed their mode of consumption, lack of prior overdose experiences, and tolerance levels as instrumental in reducing their overdose risk, despite a poisoned drug supply. When using alone, Donna noted how she adapted her consumption practices to minimize overdose risk:

> I just try to be careful. I try to smoke it instead of smash [i.e. inject] it. […] That's my form of harm reduction. I'm okay. Like, I feel okay. Knock on wood, you know? I've been okay so far, right? So, I'm just gonna keep pushing my luck.
>
> (50-year-old white woman)

Similarly, Lydia (45-year-old Asian woman) explained: "*I've never overdosed, like I always test my dope and I don't overuse. So, I've never OD'd. I've never dropped. Nothing. Yeah, I'm one of the lucky ones*." Like Lydia and Donna, participants frequently described what they perceived as acting responsibly when using, including "*test[ing] the waters*" to feel the strength of the drug, "*babying shots*" (i.e. injecting a smaller amount at a time), and trying to buy from the same dealer. By engaging in what they viewed as responsible drug use practices, participants perceived their overdose vulnerability – fatal and non-fatal – to be lowered, even when "*lucky*" within the context of adulterated supply. Importantly, these same actions (e.g. testing drugs, using less) led participants to use alone as it was seen as a safe, and often preferable, option.

High tolerance levels and the use of stimulants in conjunction with opioids were also perceived by participants as decreasing overdose risk. For example, Lauren described that because she has used for decades, she did not perceive herself to be at risk of overdosing:

> I mean, I've never overdosed, so I'm fine with doing it in my room by myself. I have such a high tolerance that it's ridiculous. I don't even get high half the time. Just my nose stops running for a while. […] I've been doing down, heroin, whatever you want to call it, since I was 13 years old. I'm almost 40. I've never overdosed, not once. Not on heroin. […] I'm not going to overdose on the dope that's out here. It's not strong enough.
>
> (38-year-old white woman)

For 'Diana,' a 46-year-old Indigenous transgender woman, polysubstance use was described as significantly reducing overdose risk, despite reports of stimulant-related overdoses in the community (BC Coroners Service, 2019):

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> If I'm on crystal meth I'll use alone because it's an upper. I've had crystal meth that's had fentanyl added in with the ingredients, but since it's an upper and it's a really super high upper, it's impossible to go down on crystal meth.

Like Lauren and Diana, all participants noted long histories of drug use or periods of intense drug use, which increased their tolerance levels, and all regularly used a mixture of stimulants and opioids. For most, these factors were seen as minimizing their overdose risk.

DISCUSSION

This research examined the role of HOPS in shaping fatal overdose vulnerability for WWUD living in SRA housing. While HOPS are integral to the overdose response in BC, we found that the social (e.g. accessible to guests, crowded) and structural dynamics (e.g. prohibited smoking, surveillance mechanisms) of HOPS created complex barriers for women who largely did not access these spaces (see Table 1). To minimize risk of violence, most participants chose to consume drugs primarily alone in their rooms. Despite increasing their risk of fatal overdose, using alone was seen as a safer option as participants could control their immediate environment. Further, many participants with access to HOPS did not view themselves to be at risk of an overdose, despite a poisoned illicit drug supply, due to drug use practices and tolerance levels. Importantly, our findings underscore how the low-barrier design of HOPS often excluded women, reinforcing their overdose vulnerability and risk of harm.

Previous research has illustrated the instrumental impacts of integrating health and harm reduction services into the spaces individuals regularly interact with over the course of their daily lives (Fairbairn et al., 2008; McNeil and Small, 2014; Rhodes et al., 2012). This work has illustrated how such interventions can minimize risk of harm for WWUD by limiting victimization often encountered when using in public by providing an alternative space to use drugs (Boyd et al., 2018; Fairbairn et al., 2008; McNeil et al., 2014b). However, our study highlights how similar overdose-related interventions were not interpreted in the same way by women living in SRAs. Rather, the integration of OPS within SRA housing environments is rendered complex by the pervasiveness of gendered violence; the threat of which served as a barrier to accessing HOPS given their 'public' nature. Notably, however, this may be partially due to the frequent utilization of these interventions by other residents and guests, as well as variations in operational models of HOPS (e.g. unstaffed). Addressing these barriers though alternative monitoring techniques (e.g. staff or tenant worker always present) to improve feelings of safety are imperative to mitigating drug-related harm faced by WWUD. However, the pervasiveness of gendered violence against WWUD in the neighbourhood also points to the urgent need to fund efforts aimed at minimizing violence against this population, which has not yet been made a societal priority. The extensive history of racialized and gendered violence against women in the Downtown Eastside (Martin and Walia, 2019; Oppal, 2012) further underscores prioritizing and funding programming aimed at reducing violence against WWUD in ways equal to that of overdose prevention.

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While HOPS have been integrated to address the large number of fatal overdoses occurring in inside environments (BC Coroners Service, 2019), our research exemplifies how these interventions have largely been implemented in a gender-neutral way. In doing so, the current design and implementation of HOPS may inadvertently exclude WWUD. Province-wide, the discourse surrounding gendered disparities in overdose mortality and risk has largely overlooked the diverse needs of WWUD (Boyd et al., 2018). In doing so, the overdose response has been less responsive to the needs of women, including the provision of programmatic support for WWUD (Mullins, 2019). Previous research has called for the use of intersectional and gendered lenses when developing and implementing harm reduction interventions, pointing to the variations in how women and gender diverse persons experience drug use and related outcomes compared to men (Boyd et al., 2018; Collins et al., 2019a; Hansen, 2017; Iversen et al., 2015). In Vancouver, there continues to be a longstanding gap in women-centered harm reduction approaches (Vancouver Coastal Health, 2016), with our findings pointing to specific ways that WWUD are accounting for these gaps with their own strategies aimed at reducing risk of both violence (e.g. using alone in their SRA room) and overdose (e.g. testing strength of drugs). This suggests that it is perhaps women's selectivity over drug use settings – namely, ones in which they have control – that may increase their ability to engage in overdose risk reduction. In doing so, overdose-focused programmatic support for WWUD in this setting may be limited as women's self-imposed strategies may be reducing their overdose risk. Our study further substantiates the need for culturally-safe and gender-attentive overdose prevention efforts across the city, and within SRA housing, including HOPS. Specifically, we noted how the privileging of injection drug use in HOPS can reinforce fatal overdose vulnerability for women who preferred smoking and were thus excluded from HOPS. While the inability to smoke in HOPS was likely due to the lack of ventilation in SRAs, the preference for many participants to smoke underscore how this rule excluded them from HOPS, thereby keeping their risk of fatal overdose high. This unequal access of HOPS for participants who smoke was particularly important given that almost 40% of fatal overdoses in BC were from inhalation (BC Coroners Service, 2018). We suggest the provision of additional funds to integrate more diverse HOPS that are suitable to tenants' various consumption methods, as well as women-only HOPS and peer-led one-on-one harm reduction efforts to better meet the needs of women who are more comfortable using in their rooms. Engaging tenants in the design and operation of HOPS may mitigate future barriers to these interventions.

Indigenous women in our study were overrepresented and were disproportionately impacted by overdoses in the last year (Table 1), experiencing a combined 34 overdose events compared to 14 among non-Indigenous participants. Alarmingly, approximately 30% of the overdoses that occurred among Indigenous women were experienced by only two participants, both of whom lived in SRAs with no access to HOPS or harm reduction supplies. Such disparities are consistent with previous epidemiological data (First Nations Health Authority, 2019, 2017), and are further illustrative of the ways in which the overdose crisis is linked with the impacts of ongoing colonialism and social-structural factors (e.g. gendered inequities, housing policy failures). Specifically, Indigenous women are overrepresented in the Downtown Eastside and are disproportionately impacted by socio-economic marginalization, housing instability, and racialized and gendered violence

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epidemics (Collins et al., 2018; Martin and Walia, 2019; Oppal, 2012) – all significant drivers of fatal overdose risk for this population. Expanding culturally-safe overdose-related interventions across SRA settings in Vancouver is thus critical to reducing the morbidity and mortality of Indigenous WWUD.

Our findings add critical insight to the literature on overdose, by illustrating the complexities within which women navigate their drug use. Importantly, we highlight social and structural dynamics that often necessitate that women use alone so as to minimize risk of violence. Our study suggests that the pervasiveness of violence against WWUD in the neighbourhood, particularly against Indigenous women (Martin and Walia, 2019), is a critical factor that needs to be addressed to improve access to harm reduction services. Consistent with prior research (McNeil et al., 2014a; Shannon et al., 2008b), we illustrate how risk of violence within HOPS can effectively exclude women from these particular drug scene milieus, thereby increasing women's risk of fatal overdose as they choose to use in their rooms alone. Our findings are an important addition to the literature, as they are contrary to other research which have found that women are mostly likely to use around people they know (Cruz et al., 2007; Kerley et al., 2018), with men more often using alone (Hagan et al., 2007; Sherman et al., 2001). Furthermore, our study illustrates how participants did not view themselves to be at risk of fatal or non-fatal overdose due to drug consumption patterns and no prior overdose experiences, which is reflected in recent research (Moallef et al., 2019). Importantly, however, these findings are not representative of a denial of overdose risk among WWUD, but may instead point to how using drugs alone, predominately in SRA rooms, may be a protective strategy women engaged in to minimize experiences of violence. Such self-isolation among WWUD has been previously documented within the context of housing instability to minimize victimization (Knight et al., 2014; Riley et al., 2014). As such, we recommend including WWUD living in SRAs in the design and implementation of HOPS so to ensure their needs are also met within the low-barrier design of such interventions. Current harm reduction efforts and public health messaging on overdose risk, as well as future services, should consider the complexities of women's lives, and aim to address the factors contributing to their choosing to use alone (e.g. previous trauma, no perceived risk).

Moreover, almost all participants regularly used a mixture of opioids and stimulants, including methamphetamines (meth) and cocaine. This prevalence of polysubstance use amongst participants is significant given the substantial rise in overdoses deaths involving both opioids and meth or cocaine in the US and Canada (BC Coroners Service, 2019; Gladden et al., 2019). Specifically, in BC, meth-involved overdoses have increased from 14% to 35% between 2012–2018, with cocaine involved in over 50% of overdose deaths in the province (BC Coroners Service, 2019). As most participants described their polysubstance use as a risk reduction strategy to minimize risk of fatal overdose, there is an urgent need to adjust public health messaging to better elucidate the ways in which people who co-use substances can reduce risk. Further, expanding overdose-related interventions to include a focus on polysubstance use and ways to reduce overdose risk for this population is critical to minimizing morbidity and mortality for WWUD.

Research describing low-threshold interventions has illustrated the impact of peer and staff monitoring on accessibility, particularly for women (Boyd et al., 2018; Fairbairn et al.,

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2008). In our study, most participants described security cameras in HOPS as imperative to overdose response when staff were not present. However, findings demonstrate how irregular monitoring approaches in HOPS (e.g. walk-by checks every 10–30 minutes, no camera) led to a lack of confidence among participants in staff's ability to effectively respond to an overdose and reinforced feelings of unsafety for women related to overdose and physical safety. This same lack of surveillance was preferred by some participants as it allowed them to purchase drugs in HOPS. As increased surveillance in SRAs can enable forms of control (Boyd et al., 2016), it is important to communicate with residents to determine what changes should be made to increase feeling safe in HOPS. Further, there is a critical need to increase HOPS resources to improve staff and peer worker overdose response training and hire additional staff to monitor HOPS as this may contribute to accessibility of HOPS, thereby minimizing fatal overdose risk.

This paper has several limitations that should be considered. Findings are specific to HOPS in Vancouver and are not representative of all WWUD living in SRAs, nor women accessing consumption sites located outside of housing environments. Moreover, gender and sexually diverse participants were underrepresented in this study, which may obscure their experiences of overdose vulnerability and SRA housing in general. Given space constraints of HOPS, as well as a lack of uptake by participants, fieldwork was not conducted in these settings. As such, there may be additional gendering and racialization of these spaces that were overlooked and should be examined in future research. Further, of the participants who lived in SRAs with HOPS at baseline, four did not complete follow-up interviews, with three of these participants racialized. While only one of these participants had accessed the HOPS at baseline, we may be underreporting barriers and facilitators to HOPS utilization and how these changed over time. Future research on HOPS should also include perspectives from SRA staff which may further inform how to effectively adapt HOPS to better meet tenants' needs.

Overall, this research emphasizes the complexities of HOPS for WWUD, as they had to manage housing instability, risk of violence, and overdose vulnerability. In their current form, HOPS present gendered barriers to women's engagement, therefore falling short of minimizing drug-related harms for women living in SRAs. Reshaping these interventions so they are more attuned to the various needs of tenants and multiple drug use modalities, may be critical to increasing utilization of HOPS and minimizing risk of overdose in SRAs.

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Table 1.

Participant demographics at baseline (n=35) and follow-up (n=20)

Participant characteristic	Baseline n (%)	Follow-up n (%)
Age		
Mean	42	40
Range	21–57 years	27–50 years
Ethnicity		
Indigenous	18 (51.5%)	12 (60.0%)
White	15 (42.8%)	7 (35.0%)
Other (Black, Asian, multiracial)	2 (5.7%)	1 (5.0%)
Gender		
Cisgender	32 (91.4%)	17 (85.0%)
Transgender, two-spirit[1], non-binary	3 (8.6%)	3 (15.0%)
In a relationship		
Yes	21 (60.0%)	11 (55.0%)
No	14 (40.0%)	9 (45.0%)
SRA housing type		
Non-profit	19 (54.3%)	13 (65.0%)
Privately-operated	9 (25.7%)	2 (10.0%)
Privately-owned, non-profit-operated	7 (20.0%)	2 (10.0%)
Unhoused[2]	0 (0.0%)	3 (15.0%)
Overdoses[3]	**In past year**	**In previous 6 months**
None	18 (51.4%)	18 (90.0%)
One	8 (22.8%)	1 (5.0%)
Two	2 (5.8%)	0 (0.0%)
Three or more (range: 3 – 10 overdoses)	7 (20.0%)	1 (5.0%)
Integrated harm reduction services in SRA		
HOPS and harm reduction supplies	17 (48.6%)	9 (45.0%)
Harm reduction supplies only	4 (11.4%)	5 (25.0%)
No harm reduction supplies	14 (40.0%)	3 (15.0%)
N/A[4]	0 (0.0%)	3 (15.0%)
Ever utilized HOPS[5]		
Yes – for consumption	6 (17.1%)	6 (30.0%)
Yes – for harm reduction supplies only	1 (2.9%)	0 (0.0%)
No	10 (28.6%)	4 (20.0%)
N/A	18 (51.4%)	10 (50.0%)

[1] A non-binary, fluid term denoting Indigenous persons with both feminine and masculine spirits; used to describe sexuality or gender (Ristock et al., 2010).

[2] Participants reported staying at shelters, with friends in non-profit operated SRAs, and sleeping outside.

[3] Indigenous participants reported a total of 34 overdoses within the last year at baseline, compared to 14 overdoses among non-Indigenous participants.

[4] Includes unhoused participants at follow-up.

[5] All participants described their HOPS utilization as a singular event or sporadic; no one reported regular use.

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