



Community perceptions surrounding Lisbon's first mobile drug consumption room

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ABSTRACT

Portugal's first Mobile Drug Consumption Room (MDCR) has been operating for over three years in two Lisbon neighborhoods. This qualitative study first creates a baseline understanding of community perceptions concerning the acceptability of and expectations surrounding drug consumption rooms in the communities of intervention. Then, at least six months after the initial interviews, it determines how these perceptions changed and what changes participants perceive in the neighborhoods. Findings highlight widespread acceptance of the MDCR among participants. One of the participants' priorities related to the MDCR was to lessen the visibility of public consumption, a change some participants perceived in the neighborhood. While in the first round of data collection participants primarily conceptualized the MDCR as a service for People Who Use Drugs (PWUD), in the follow-up round, they reported changes in the community.

1. Introduction

While Drug Consumption Rooms (DCRs) are harm reduction services targeted at People Who Use Drugs (PWUD), they also have the potential to impact their surrounding communities in both visible and less tangible ways. Before the implementation of DCRs, surveying the proposed intervention area creates a baseline understanding of the problems present there [15], as well as of the acceptability [11,15] of the service, and anticipated community-level changes due to service implementation [15]. Informants relevant to establishing this baseline include residents, police, and community leaders such as business owners [15]. Anticipated positive changes linked to DCRs include fewer neighborhood problems [11], reduced public drug use [15], increased contact of people who use drugs with health and social workers [11,15], reduced overdose deaths or infectious disease spread among people who use drugs [11], and safer drug injection practices [11]. On the other hand, it is common for community members to have concerns surrounding the opening of DCRs in line with the Not in My Backyard (NIMBY) principle [6].

Upon implementation of DCRs, evaluation of the service's impact on clients is often accompanied by an evaluation of its impact on the surrounding environment, which can include the impact on community members and their perceptions. Residents [9,15], businesspeople [9], PWUD [15] and other key informants such as service providers [4] are called upon to evaluate neighborhood changes [9]. These include positive and negative effects of DCRs [9], changing perceptions of drug use [9], and crime rates [4].

A common design for evaluating community-level changes over time due to DCRs involves staggering the evaluation to different points in time, such as at different time intervals after operation begins [9], or utilizing a pre-post design to collect data before and after beginning the service [2,4,14].

This exploratory study aimed first to document community perceptions and knowledge about drug consumption rooms (DCRs) in the two neighborhoods in Lisbon where the country's first Mobile Drug Consumption Room (MDCR) operates. Then, at least six months after the initial interviews, participants interviewed at the baseline were approached again to see if and how their perceptions of and knowledge surrounding the MDCR had changed.

The MDCR is the first DCR in Portugal and has an integrated model of care, meaning that it provides a safer space for injected consumption, and basic healthcare, psychosocial support, peer education, referral to other health services, and assistance for clients to navigate the health and social systems. Among the MDCR's services, rapid testing for HIV, viral hepatitis and syphilis are open to all community members, regardless of whether they use drugs. The MDCR is housed in a van, allowing it to travel between locations, and has two spaces for consumption and an office. The team running the MDCR is multidisciplinary, consisting of peer workers, nurses, psychologists and social workers.

This research attempted to answer the following questions: (1) What perceptions do community members have of the MDCR? (2) What positive and negative changes do the community associate with the MDCR? (3) What is the community's perception of safety as related to drug consumption?

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2. Materials and methods

The study followed a quasi-pre-post design. Two questionnaires were used to guide semi-structured interviews, with open-ended and list-based questions. Therefore, the data generated is both quantitative and qualitative in nature. Questionnaires were co-designed between two of the authors based on existing literature surrounding perceptions of DCRs and the effects of DCRs on communities. All participants included in the study either live or work in the neighborhoods where the MDCR operates, or both. Interviews were conducted in a private location of the participants' choice. Many were conducted at participants' workplaces, some at neighborhood associations, and one in the street. When the Covid-19 pandemic began, interviews shifted to video or phone calls. Interviews were not recorded; notes were taken during each interview. Interviewers were psychologists and social workers employed at the MDCR.

The first questionnaire included questions regarding participants' perceptions about DCRs and the MDCR specifically, positive and negative changes expected with the implementation of the MDCR, perception of drug consumption in the area, and perceptions of safety. The second questionnaire was answered by a subset of the same participants, at least six months after the first, and included questions regarding the knowledge they had of the MDCR and its services, perceived positive and negative changes in the community since the start of the program, perception of drug consumption in the area, and perceptions of safety. The first round of interviews occurred between April 2019 and April 2020. The onset of the COVID-19 pandemic extended the second round of data collection, which occurred between July and November 2020.

2.1. Recruitment and enrollment

Participants were recruited using purposive and snowball sampling. In line with purposive sampling, the first participants recruited were leaders or were seen as influential in their neighborhoods and can be considered experts or key informants. These initial participants were identified during community meetings held before the service's implementation. These meetings included local association representatives, NGO workers, and residents. The intention to document community views of the MDCR was explained in these meetings. After this first iteration of participants was interviewed, snowball sampling began. Participants suggested other participants, and a wider selection of community members was reached this way. In line with purposive sampling [7], only community members with a minimum level of knowledge of the MDCR could participate, so that they could provide insight into how the implementation was perceived in their neighborhood.

The neighborhood of Beato is close to the city center but not in the city center, unlike Arroios. The neighborhood is home to social housing projects. It lacks social services and connections with public transport compared to other neighborhoods in Lisbon. There is population pressure on this neighborhood, and similar neighborhoods in Lisbon, as prices rise and residents are pushed towards living on the outskirts. Beato is also characterized by an open drug scene and a history of known and concentrated drug use. Arroios, with its central location in Lisbon, is a busy neighborhood where social relations are more diffuse and people more anonymous. It is harder to reach PWUD in this neighborhood given that use, especially injected use, is hidden and PWUD tend to consume indoors. There is less public and less concentrated injecting drug use. There are more social services available to vulnerable populations in this neighborhood and better public transportation connections.

Participants were given an alphanumeric code to maintain their anonymity and their responses were kept confidential. All participants provided written informed consent. In the second round, participants were not presented with their responses from the first for comment. This study was approved by the Ethics Committee of the Administração Regional de Saúde de Lisboa e Vale do Tejo (112/CES/INV/2019).

2.2. Analytical methodology

The closed-ended questions yielded quantitative data, which was analyzed using Microsoft Office Excel statistical tools to provide descriptive statistics.

The quantitative data from the open-ended questions were analyzed using thematic analysis, following inductive reasoning, with the theme being the primary product. Themes are, "attributes, descriptors, elements and concepts," [13], that are used to organize repeating ideas in a body of data. Themes can, "elicit the essence of the participants' experiences" [13]. Sub-themes are used to highlight patterns in participants' definitions of and utilization of themes. Categories are used to classify themes and are usually developed at the beginning of the data analysis process as one of its guiding structures [13]. In line with Constat's work on the emergence of categories [3], in our analysis, participants had the primary power to define the categories based on how they expressed meaning and offered definitions in their accounts.

Our analysis of the responses to open-ended questions relied on pattern recognition as a tool to determine the "frequency, typicality, or even intensity of an event" [10]. The definition of themes was done iteratively, to clarify the patterns the researchers observed emerging. This process was cyclical and required many iterations. While coding the responses by hand, the researchers used pattern recognition to identify common themes and to draw attention to uncommon or exceptional themes. In line with Polit and Beck's recommendations, we utilized 'investigator triangulation' by analyzing and coding the data independently at first [8]. The two coders left research notes for one another, allowing for increased flexibility and providing an external memory for the data analysis process [8]. Then, after reviewing the codes and one another's comments, both researchers coded the second round together, defining and refining categories while moving through the corpus of data. A third researcher, who took part in both the questionnaire design and administration, verified codes and their definitions, especially in cases of disagreement or doubt.

The themes are distinct, but usually repeated, comments by participants. The number of times that each theme emerged in participants' responses was counted to see which themes were the most common. Themes were counted not based on how many respondents mentioned a specific theme, but rather on how many mentions there were. This counting method was chosen because it was very common for respondents to mention several distinct aspects of the same theme in their response, and the researchers wanted to capture all of that data in the counts. Counting the instances of each code was done independently at first. Then, in instances of disagreement, the data were double-checked until an agreement was reached on the same count.

Categories emerged as levels at which participants expressed their ideas. In this context, this meant whether their response concerned PWUD, the larger community, or something else. While a literature review was conducted before the study design and analysis, the literature review was utilized primarily to shape the questionnaire design, rather than analysis of results. In line with inductive qualitative research, an iterative analysis was used to allow themes to emerge from the data [12].

We aimed to balance immersion in and distance from the data. Immersion is necessary to sufficiently understand the context and the data enough to elicit themes, while some distance is required to maintain objectivity. This was accomplished by having two authors conduct the primary data analysis. One of those authors collected the majority of the data, and the other co-designed the questionnaire but was not involved in the data collection process. The closeness facilitated by the participation of the interviewer allowed for a deeper understanding of participants' contexts and attitudes and, in instances where responses were unclear, allowed meaning to be understood. The participation of the researcher who did not take part in interviews facilitated a critical approach toward data analysis and allowed for additional rigor [8]. After the questionnaire data was collected, one researcher translated the data from Portuguese to English, and another checked the translation.

3. Results

3.1. Participants

29 individuals responded to the first round of questionnaire administration, 48% ($n = 14$) from the neighborhood of Arroios and 52% ($n = 15$) from Beato. The average number of years spent living or working in the neighborhood was 25 years. There was a wide age range, with 31% ($n = 9$) of participants aged 25–39, 21% ($n = 6$) aged 40–49, 28% ($n = 8$) aged 50–59 and 21% ($n = 6$) over the age of 60. More than half (59%; $n = 17$) of the respondents were male, and 41% ($n = 12$) were female. The majority of the sample (69%; $n = 20$) were employed, 7% ($n = 2$) were unemployed and 24% ($n = 7$) were retired.

When asked about their experiences of drug use, excluding cannabis, 10% ($n = 3$) reported a history of personal drug use. Among their friends and family, 59% ($n = 17$) reported a history of drug use. This proportion was higher in Beato at 66% ($n = 10$) than in Arroios (50%; $n = 7$). It can be concluded that the sample of participants has strong ties to their neighborhoods, and some exposure to drug use through their networks, especially in Beato. A subset of 21 of these participants, 8 (38%) from Beato and 13 (62%) from Arroios, participated in the second round of survey administration. Most cases of participant drop-off were due to loss of contact due to the COVID-19 pandemic, and one participant passed away.

3.2. First-round results

3.2.1. Acceptability of the MDCR

Participants were asked: What is your opinion about drug consumption rooms, and why? They were given the following options: positive, negative, neutral, and unknown. All respondents reported positive opinions of drug consumption rooms. When explaining their reasons for positive opinions about MDCRs, the most common responses related to PWUD's health and safety, community-level visibility of use, and that the service represented an active response to drug-related problems in the neighborhood.

"Since there is consumption in the neighborhood, we need a response here as well."

These themes are in line with the function of the MDCR as a health and harm reduction service aimed at PWUD, signaling widespread knowledge of the purpose of DCRs. Many responses were multi-faceted, touching on many themes in their responses.

"It is a question of safety. Consuming publicly is dangerous, other people or police can make it worse. It is a question also of hygiene and health - to avoid material sharing. Also, it will contribute to less litter. Less risk to the community, including kids."

In addition to community-level visibility, wherein participants expressed the desire not to see consumption, community hygiene was also a priority. Participants shared their desire to find less consumption-related waste in public.

"Get rid of the environment of addiction from the street."

There were also many comments which reflected the potential of the intervention to offer a more dignified space for PWUD and for them to access care more generally, including trusting relationships with staff. The service's potential to lessen community-level stigma related to PWUD and drug use was also mentioned. These aspects demonstrate that participants understood the service as holistic, going beyond simply offering health and social services, but also supportive of PWUD more generally, and even facilitative of their social integration.

"An open door for care, in case they want it. A way to gain the trust of users."

Additionally, despite all participants expressing support for MDCRs, a few comments also reflected stigma towards PWUD or drug use, or a misunderstanding of harm reduction.

"A way to have a place to sustain addictions."

3.2.2. Anticipated positive changes

Anticipated positive changes mirrored participants' stated reasons for acceptability. As such, the nature of the MDCR as a health service was the

most referenced positive change. Participants anticipated that the service would allow PWUD to consume more safely.

"Consumption with fewer risks to the person."

Likewise, in line with the potential to lessen the visibility of consumption being a primary reason for the acceptability of the intervention, lessening visibility was the most commonly anticipated positive change at the community level. Lessening the visibility of consumption was mentioned primarily as a benefit to the community, though it was also mentioned also as related to PWUD. The following response, for example, contains both.

"The population doesn't have to see and the PWUD don't have to be afraid and hide."

3.2.3. Negative changes anticipated as a result of the MDCR

Among those who anticipated any negative change, which included 66% ($n = 19$) individuals, the participants' anticipated negative changes were more often related to the community level than to PWUD. The most mentioned change was an increase in local consumption, driven by PWUD coming to the neighborhood to utilize the service.

"More flow of people around the area where the MDCR is stopped."

Negative public opinion was also anticipated, though respondents distanced themselves from such opinions, saying that they would potentially be held by other community members.

"No. It is all positive. There may be people who don't like it."

In the theme defined as misconceptions, participants asserted that some people may have incorrect ideas about the MDCR. These can be either positive misconceptions, in the interviewee's view, or negative. For example, one positive misconception would be to believe that the MDCR would stop people from consuming when that is not the case. An example of a negative misconception is a negative opinion due to not understanding the MDCR when it is a good intervention for the community. In a similar phenomenon to the theme of negative public opinion, participants anticipated the thoughts of others, often assuming they would be negative.

"There will be people who do not agree, but that is because of a lack of information and preconception."

3.2.4. Security

Nearly half (48%; $n = 14$) of respondents reported having found discarded consumption material in the past month and 45% ($n = 13$) reported having witnessed injections in public in the past month. When asked about what issues participants associated with public drug use in the neighborhood, 66% ($n = 19$) mentioned consumption waste, 52% ($n = 15$) assault or robbery, 41% ($n = 12$) intimidation, 41% ($n = 12$) squatting, 38% ($n = 11$) begging, 31% ($n = 9$) trafficking-related violence, 24% ($n = 7$) sex work, and 17% ($n = 5$) police violence. All respondents signaled at least one consumption-related problem. About half of the respondents had regular exposure to drug use in the neighborhood and regularly found consumption-related waste. The most common concerns among respondents related to public consumption were consumption waste and assault and robbery.

3.3. Results from the second round of questionnaire administration

21 participants responded to requests for a follow-up questionnaire. However, one respondent's data were excluded from the analysis given concerns about their capability to respond, due to the participant displaying signs of dementia that were not present in the initial interview. 40% ($n = 8$) of respondents lived or worked in Beato and 60% ($n = 12$) in Arroios. When asked if they knew about the available services at the MDCR, 85% ($n = 17$) said yes. Responses in this round tended to be more general, encompassing broad reasons for acceptance and broad changes. Responses were also more focused at the community level than in the first round.

3.3.1. Awareness of MDCR services

When asked which services they were aware of, participants answered detailing services available for PWUD. Health services, particularly

supervised consumption, were common responses. Support available for PWUD, especially social support, including psychosocial sessions or MDCR staff guiding PWUD to services, was also commonly mentioned. Participants were aware of the MDCR's services both as a site for safer injection, but also for social services and integration.

When asked if they had ever had contact with the team operating the MDCR, 30% ($n = 6$) reported having had such contact. When asked how far their workplace or residence was from the MDCR's location, 50% ($n = 10$) of participants reported that the MDCR was less than 5 min away walking, 30% ($n = 6$) reported that it was over 10 min away, and 20% ($n = 4$) reported that it was between 5 and 10 min away. When asked how often they saw the MDCR, 15% ($n = 3$) reported seeing it daily, 35% ($n = 7$) reported seeing it weekly, 25% ($n = 5$) reported seeing it monthly, 20% ($n = 4$) reported seeing it less than once a month, and 5% ($n = 1$) reported never having seen it. For most participants, the MDCR was close by, and they saw it, but they did not have contact with the MDCR staff.

3.3.2. Reasons for acceptability of the MDCR

All participants remained positive about the presence of the MDCR in the neighborhood. PWUD support was the most mentioned reason for positivity at the level of PWUD, encompassing a general belief among participants that the MDCR benefitted PWUD.

"It's good to help those who need it."

While PWUD support was present among reasons for acceptability in the first data collection round, PWUD health dominated. In the follow-up round of data collection, PWUD health was the third most mentioned theme, supplanted by PWUD support and community wellbeing. PWUD support is a more general category as compared to health or safety, which could reflect that the participants came to generally accept the MDCR, focusing less on the details of the service as it had already been operating in the neighborhood. The same could be seen at the community level: wellbeing, the most general community-level theme, reflects acceptance of and support for the service in a broader way.

"It gives help in the area, we notice that it has had a very positive impact."

These two themes are quite complementary, distinguished only by the level at which the comments were specified—the category. Again, the prevalence of these types of responses highlights a generalized acceptance of the MDCR, one that does not depend on specifics of the service or its operation.

3.3.3. Positive changes in the neighborhood

Most responses concerning positive changes focused on the community level, which makes sense given that community members were surveyed, and they could only speak for their own experience. In line with participants' stated priorities in the earlier questionnaire, participants attributed seeing less consumption to the MDCR. However, this finding must be carefully interpreted, given the COVID-19 pandemic and its effects on the movement and visibility of people.

"I never saw someone inject on the street again, because there is an available resource."

The fact that the post-round data focused on community-level changes may be due to the reported lack of contact between community members and the MDCR. Participants, though they knew that MDCRs are primarily health services aimed at PWUD, did not feel capable of judging whether the service lived up to its potential by improving the health of PWUD.

3.3.4. Negative changes in the neighborhood

Most participants did not share any negative changes. The only negative change was, as anticipated, more PWUD coming to the neighborhood to consume. It is important to note that in the case of the two participants who noted an increase in consumption locally, they added that this was not a problem for them. While appraising an additional flow of consumers as negative, they distanced themselves from judgment about it.

"Variation in the flow of consumers, with a slight increase, but it is not significant enough to be considered negative. Consumers will always exist, in one place or another."

3.3.5. Security

When asked if they had found discarded consumption material in public in the prior month, 40% ($n = 8$) said yes. When asked if they had seen someone inject in public in the prior month, 20% ($n = 4$) responded yes. Concerning issues they associated with public drug use in the neighborhood, 75% ($n = 15$) reported begging, 65% ($n = 13$) consumption-related waste, 50% ($n = 10$) intimidation, 45% ($n = 9$) assault or robbery, 45% ($n = 9$) squatting, 45% ($n = 9$) trafficking-related violence, 45% ($n = 9$) sex work, and 25% ($n = 5$) police violence. All participants signaled at least one problem. Participants were also asked to what extent they consider injected consumption in public in the neighborhood to be a security concern. Among participants, 45% ($n = 9$) said not at all, 35% ($n = 7$) said a little bit, 15% ($n = 3$) said moderately, and 5% ($n = 1$) said to a great extent.

When comparing the results relating to security to the first round of data collection, a lesser proportion, about half (from 45% to 20%) of participants, reported seeing injections in public in the past month. However, in the follow-up round, similar proportions of participants reported having found consumption waste in public (from 48% and 40%) and the proportion of participants associating public drug use with consumption-related waste remained constant at 65%. The proportion of participants concerned about assault and robbery remained high, but other concerns also emerged as significant, including begging and intimidation. It can be concluded that while fewer participants saw consumption, the problems associated with it, including consumption-related waste and robbery, did not improve or even worsened, with new concerns emerging. These changes cannot be attributed to the MDCR, at least not only due to the MDCR, given the myriad changes that occurred between data collection rounds. The increase in begging, for example, could be due to changing economic conditions during the COVID-19 pandemic.

4. Discussion

In line with prior research, community members in this context were positive about DCRs [1]. Acceptability of the MDCR began high and stayed high in the follow-up questionnaire. Results in the second round of questionnaire administration reflected a generalized acceptance of the MDCR that was less predicated on details. When asked why they were positive about the MDCR, respondents shared generally that it helped PWUD, and that it was generally positive for the community. There was a notable lack of perceived negative changes following the MDCR's implementation.

Participants' responses throughout the questionnaires showed their significant knowledge about the nature of the MDCR [9], in terms of what services are provided and how they could benefit PWUD and communities. Even in initial interviews, participants' reasons for supporting MDCRs reflected a high level of knowledge about the purpose of the intervention as primarily a health response aimed at PWUD.

This study design does not allow for generalization, but rather for understanding participants' perceptions and priorities. Visibility was a primary concern, as participants wanted to stop seeing consumption in public in their neighborhood. When mentioning visibility, it was common for participants to mention children. They shared a desire to protect children from seeing drug use and finding drug use materials. Community members desired and anticipated a lessening of visibility of drug use, and some participants reported that this was achieved.

In line with existing research [9], a smaller proportion of participants reported having seen public injection in the last month, a finding which must be interpreted with caution given the COVID-19 pandemic. The pandemic could have affected the dynamics of visibility in multiple ways. First, as some residents stopped leaving their homes, they may not have been able to report what happened outside. At the same time, as the streets became emptier, PWUD and drug use may have become more visible.

The results differ from existing research concerning DCRs' links with a reduction in publicly-discarded consumption equipment [9,14]. When asked about security, according to participants, consumption in public

went down but not the issues associated with it, primarily consumption-related materials. Slightly less but similar proportions of participants reported having found discarded consumption material in public in the last month and consumption-related waste remained a primary concern related to public drug use. Some participants mentioned less waste in public as a positive change in the neighborhood. However, it is important to note that the way participants were asked about consumption-related waste in public was not specific to materials utilized for injection, so the data is less sensitive to the nuances of injection-related materials versus other types of waste.

Positive anticipated changes are also commonly related to PWUD health, but no participants stated perceived changes related to PWUD health. Participants did not seem confident to assert that these individual health gains had been achieved by the service in the follow-up round; they instead reported perceived changes at the community level. By the second round, participants' responses were more general, implying that they had not personally seen some of the benefits they anticipated, especially for PWUD. This makes sense given that community members lacked knowledge of service uptake. Service records are confidential and there was a self-reported lack of contact between the MDCR and the community members in the sample. While some existing literature highlights MDCRs' potential to increase contact between PWUD and the community [1], in this case, there was no evidence for an increase in contact. It appears that the MDCR did not change the status quo concerning contact between PWUD and other community members, though these dynamics need to be investigated further. Unique dynamics may be due, for example, to the mobile nature of the MDCR as compared to a traditional DCR which becomes a permanent fixture in the community, or an already-high level of contact between PWUD and other community members.

When asked about the services provided at the MDCR, answers focused on PWUD, demonstrating that participants primarily understand the MDCR as a service for PWUD. While this is the case, the absence of mentions concerning the community-level services provided such as infectious disease testing and cleaning the area of consumption materials is notable. This could indicate that those in the sample of participants are not among those who utilize the MDCR services available to the community. This could reflect an opportunity for more publicity, community education, or community engagement so that those working and living in the neighborhood may better understand the benefits of the MDCR.

Participants anticipated more people coming into the community to consume. Ultimately, there were only two mentions of this occurring. Among participants who mentioned this as a negative change, they stated that it was not a problem for them. In general, a pattern emerged of participants considering and reporting others' negative opinions and misconceptions but saying that they personally had no problem. Whenever reporting a negative change or opinion, participants distanced themselves from it.

In their analysis of the discourse surrounding DCRs in French media from 1990 to 2017, Jauffret-Roustide and colleagues found that residents' concerns about DCRs opening in their area were not directly related to PWUD themselves, but rather derived from their apprehension concerning living in a problematic neighborhood, including deterioration of infrastructure and real estate values [5]. This could be part of the reason that participants anticipated negative reactions, like worsening public opinion, on the parts of others. While they were personally comfortable with the service, they may have worried about the MDCR's effects on the neighborhood. However, the theme of anticipated negative public opinion disappeared in the follow-up round of data collection, suggesting that this did not turn out to be the case upon service implementation.

4.1. Limitations

This study relied on extremely limited research resources, both financially and in terms of human capital. The researchers who collected the data were working at the MDCR; delivering harm reduction services was their primary responsibility. This prevented audio-recording of the interviews, which would have facilitated a deeper qualitative analysis.

This study was limited by the small sample size, especially in the second round. The purposeful snowball sampling method limits external validity and therefore generalizability of the results. The results can only describe the opinions of some community members in the neighborhoods of intervention. That said, external validity was not the research's priority; the priority was to understand and document community members' perceptions and opinions related to the MDCR's intervention.

Additionally, changes in which themes emerged between the pre- and post- rounds cannot be compared due to a significant drop-off of participants. There is no way to know whether the participants who dropped out of the data collection were somehow different from those who stayed, and what responses could have been observed if they remained in the study. In particular, the statistical findings related to security are limited due to the small sample size, made even smaller by the drop-off of participants. However, the small sample size is inevitable given the community research design, the time lag, and changes in circumstances between the first and second round of data collection. The small sample does not hinder pattern recognition.

Another limitation of this research is that the two neighborhoods, which have different characteristics and dynamics, are analyzed together. A deeper analysis may have been possible if they were considered separately. However, the researchers decided not to separate the neighborhoods given the small sample size and the generally similar demographics between the neighborhoods.

Given these limitations, there is a ripe opportunity for further research in this area, for example focusing on relationships and points of contact between the MDCR, its staff, and residents. Such research could also investigate if the intervention has changed relationships with PWUD and other community members in the spirit of Bancroft and Houborg's research conducted in Copenhagen [1].

4.2. Conclusions

There was a high level of acceptability of the MDCR, before and after service implementation. The only negative change that participants shared was more PWUD coming to the neighborhood to consume, and only two participants mentioned this. Participants tended to distance themselves from any negative opinion or perception of the MDCR in both rounds of data collection, sharing that they were rather anticipating others' reactions. Lessening the visibility of consumption was a priority for participants. Lessening the number of materials found in public was another priority. Understanding of the MDCR and its benefits was predicated on PWUD health, especially in the first round, while generalized positive changes were shared in the positive round, both for PWUD and for the community. This dynamic may suggest a lack of contact between community members and the MDCR and/or PWUD. However, relationships between PWUD and other community members were not the focus of this research effort, which was exploratory in nature. Further research could identify how the dynamics of acceptability and community priorities evolve, and perhaps could investigate the relationships between community members and PWUD.

Funding

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendices

Table 1

Reasons for acceptability of the MDCR.

Category	Theme	Mentions	Sub-theme	Mentions
PWUD	1.1. Health	- Health services available at the MDCR, such as medically-assisted consumption. - Potential to respond to overdose or other injection-associated risks.	1.1.1. Hygiene	- Improved hygiene for PWUD, including during consumption. - PWUD can access clean consumption materials. - Material sharing will lessen.
	1.2. Safety	- Safety or security of PWUD. - The MDCR is a safer space to consume, including avoiding law enforcement.		
	1.3. Dignity	- Dignity of PWUD and the general conditions of their lives, including potential to lessen stigma. - The need for an adequate place and conditions, including comfort, for PWUD to consume.		
	1.4. Support	- Care for PWUD, supporting PWUD, or PWUD benefitting generally.	1.4.1. Social conditions 1.4.2. Relationships with staff 1.5.1. Recovery	- Improvement in PWUD's social conditions, including areas like employment. - Supportive relationships between MDCR staff and PWUD, including generating trust. - Treatment for addiction. - Recovery as a desired outcome.
	1.5. Access to services	- PWUD will be able to access other services.		
	1.6. Visibility	- PWUD will be protected from the public gaze.		
Community	2.1. Visibility	- The desire to stop seeing consumption. - Negative opinions about public consumption, including how it can cause discomfort. - Desire to change the location of consumption. - Lessening public consumption will improve the neighborhood atmosphere or reputation.	2.1.2. Kids	- Desire to shield kids from seeing consumption. - Desire for kids not to see consumption in order to lessen their chances of using drugs.
	2.2. Responds to drug issue	-The area needs a response because of a concentration of drug use. - The intervention is appropriate or necessary in the neighborhood. - Praise for the active nature of the response.		
	2.3. Health	- Public health or community-level health. - The MDCR will reduce the spread of diseases or infections in the community. - The community currently lacks health services.		
	2.4. Safety	- Safety, when not specified for whom, or explicitly public or community safety. - A decrease in criminal behavior, including theft.	2.4.1. Kids	- Safety of kids. - Kids picking up less injection-related materials.
	2.5. Hygiene	- Urban, public or community hygiene. - The lessening of consumption-related waste in public. - The MDCR will leave the space cleaner than before.		
	2.6. Well-being	-Well-being in a general sense. - Benefiting the public space, without mentioning hygiene.		
	2.7. Prevention	- A belief that the MDCR can prevent drug use.		
	2.8. Lessen Stigma	- The MDCR has the potential to lessen stigma in the community. - Residents will experience less fear related to PWUD or consumption.		
Other	3.1. Stigma	- The response, including language chosen, indicates stigma towards drug use or PWUD. - The response indicates misunderstanding of harm reduction services, such as to control PWUD's behavior or drug use.		
	3.2. Service model	- Positive appraisal of the MDCR's location, or that its location is flexible.		

Table 2

Positive changes anticipated as a result of the MDCR.

Category	Theme	Mentions	Sub-theme	Mentions
	1.1. Health	- Consumption will carry fewer risks. - More effective responses to overdose. - PWUD's safety will increase.	1.1.1. Hygiene	- Consumption will become more hygienic.
	1.2. Safety	- The MDCR will be a safer place for consumption. - PWUD will have a decent site for consumption.		
	1.3. Dignity	- PWUD will no longer have to hide their consumption from the public view. - PWUD will benefit from the service in general terms. - PWUD will receive more care.		
PWUD	1.4. Support	- PWUD will have increased support from qualified professionals.	1.4.1. Social conditions	- There will be less discrimination towards PWUD.

Table 2 (continued)

Category	Theme	Mentions	Sub-theme	Mentions
Community	1.5. Access to services	- PWUD will be able to access services more easily.	1.5.1. Recovery	- PWUD will recover from addiction.
	1.6. Visibility	- PWUD will benefit from being less visible, including having more privacy.		
	2.1. Visibility	- Less or no public consumption in the future. - The community will be more comfortable as consumption becomes less visible.	2.1.2. Kids	- Kids will see consumption less often. - A better environment for youth.
	2.2. Responds to drug issue	- Community members will feel that there is a response to the issue. - Changes in health, or health services, in general, for the public, or for the community.		
	2.3. Health	- Less fear in the community.		
	2.4. Safety	- Fewer injection materials on the street.		
	2.5. Hygiene	- Well-being will improve generally.	2.6.1. Complaints	- Less complaints in the neighborhood, especially related to public drug use.
	2.6. Well-being	- The social well-being of the neighborhood will improve. - The community will be better informed about drugs and drug-related problems.	2.6.2. Participation	- The importance of the DCR's participation in a network of actors in the neighborhood.
	2.7. Lessen stigma	- Community members will better understand PWUD. - The response, including language chosen, indicates stigma towards drug use or PWUD.		
		- The response indicates misunderstanding of harm reduction services, such as to control PWUD's behavior or drug use.		
Other	3.1. Stigma			

Table 3

Negative changes anticipated as a result of the MDCR.

Category	Theme	Mentions	Sub-theme	Mentions
PWUD	1.1. Incentivizes consumption	- The service will not force PWUD to consider stopping drug use.		
Community	2.1. Negative opinions	- Some people will be against the MDCR. - There will be more people coming to the neighborhood to consume.	2.1.1. Misconceptions	- Some people may have incorrect ideas about the MDCR, positive or negative. - Negative opinions about the MDCR can be improved with more information.
	2.2. Increase consumption locally	- More concentration of consumers around the MDCR.	2.2.1. Increase visibility	- More people coming to the neighborhood will make PWUD more visible.
	2.3. Increase criminality	- An increase in drug dealing.		
	3.1. None	- No anticipated negative effects. - Aspects of the MDCR or its utilization that limit its effectiveness.		
Other	3.2. Limited effectiveness	- Few people will utilize the MDCR.		

Table 4

MDCR services that participants are aware of.

Category	Theme	Mentions	Sub-theme	Mentions
PWUD	1.1. Health	- Direct medical attention, including from a nurse or doctor. - Health advice, support, or services.	1.1.1. Supervised consumption 1.1.2. Testing 1.1.3. Material distribution	- Injected consumption, including safer injection, as a service available to clients. - Assisted consumption. - Education on safer consumption practices. - Testing as a service available, including testing for STIs. - Distribution of materials within the MDCR, which happens during consumption sessions. - Social attention or support. - Psychosocial support.
				- Reintegration of PWUD, wherein a team member guides them.
				- The role of peers in delivering MDCR services.
	1.2. Support	- Generalized help or support for PWUD.	1.2.1. Social	
	1.3. Access to other services	- Referral to or accompaniment to other services. - Collection or distribution of consumption material outside of the MDCR.	1.2.2. Peer	
	1.4. Outreach			

Table 5

Reasons for acceptability of the MDCR.

Category	Theme	Mentions	Sub-theme	Mentions
PWUD	1.1. Health	- Prevention of infections.	1.1.1. Hygiene	- More hygienic conditions for consumption.
		- Harm reduction for PWUD.	1.1.2. Education on safer	- Safer injection education.

(continued on next page)

Table 5 (continued)

Category	Theme	Mentions	Sub-theme	Mentions
Community	1.2. Support	- Positive health outcomes for PWUD.	injecting practices	
		- Better conditions in case of overdose.		
		- The MDCR gives help or support to PWUD.		
		- The MDCR helps PWUD face their problems.		
		- The MDCR is a comprehensive intervention for PWUD.		
	1.3. Safety	- The MDCR will help the people who 'need it'.		
		- The MDCR protects PWUD.		
	1.4. Visibility	- PWUD are safer by not having to consume in public.		
		- PWUD gain privacy with the MDCR.		
	2.1. Safety	- PWUD no longer have to consume in public.		
		- The MDCR protects the community.		
	2.2. Hygiene	- Community security.		
		- Lessening of consumption waste in the street.		
	2.3. Visibility	- Desire not to see consumption.	2.3.1. Kids	- Protecting youth from seeing consumption.
		- Public or visible injection has lessened due to the MDCR.		
Other	2.4. Health	- Betterment of public health.		
		- Harm reduction for the community.		
		- The MDCR is a supportive service for the neighborhood.		
		- A need for services in the neighborhood.		
		- The MDCR will help without specifying the recipients.		
Community	2.5. Wellbeing	- There is a current need due to increased public consumption or visibility of consumption.	2.5.1. Participation	- A sense of community and neighborhood involvement with the MDCR.
		- There is a current need due to increased public consumption or visibility of consumption.		
Community	2.6. Responds to drug issue	- There is a current need due to increased public consumption or visibility of consumption.		
		- There is a current need due to increased public consumption or visibility of consumption.		
Other	3.1. MDCR advantages	- A positive appraisal of the location of the MDCR.		
		- A positive appraisal of the location of the MDCR.		

Table 6

Positive changes perceived in the neighborhood.

Category	Theme	Mentions	Sub-theme	Mentions
PWUD	1.1. Service access	- More people coming to the neighborhood to use the MDCR.		
Community	2.1. Visibility	- There are fewer areas of concentrated consumption.	2.1.1. Kids	- Kids and youth now see less consumption.
		- There are less consumers visible in public or less public consumption.		
	2.2. Hygiene	- Less consumption material on the streets and in the public space.	2.3.1. Complaints	- Neighbors now complain less about public consumption.
		- Fewer disturbances in the public space.		
Other	3.1. None	- An acceptance of the service, or a lack of complaints.		
		- There are no positive changes or everything has stayed the same.		

Table 7

Negative changes perceived in the neighborhood.

Category	Theme	Mentions
Community	1.1. Increase consumption locally	- There has been an increase in consumers in some areas.
Other	2.1. None	- No negative changes due to the MDCR.

References

- [1] Bancroft H, Houborg E. Managing coexistence: resident experiences of the open drug scene and drug consumption rooms in inner vesterbro, Copenhagen. *Contemp Drug Probl.* 2020;47(3):210–30. <https://doi.org/10.1177/0091450920912495>.
- [2] Belackova V, Salmon AM, Day CA, Ritter A, Shanahan M, Hedrich D, et al. Drug consumption rooms: A systematic review of evaluation methodologies. *Drug Alcohol Rev.* 2019;38(4):406–22. <https://doi.org/10.1111/dar.12919>.
- [3] Constan MA. Qualitative analysis as a public event: the documentation of category development procedures. *Am Educ Res J.* 1992;29(2):253–66. <https://doi.org/10.3102/00028312029002253>.
- [4] Freeman K, Jones CG, Weatherburn DJ, Rutter S, Spooner CJ, Donnelly N. The impact of the Sydney medically supervised injecting centre (MSIC) on crime. *Drug Alcohol Rev.* 2005;24(2):173–84. <https://doi.org/10.1080/09595230500167460>.
- [5] Jauffret-Roustide M, Cailbault I. Drug consumption rooms: comparing times, spaces and actors in issues of social acceptability in French public debate. *Int J Drug Pol.* 2018;56:208–17. <https://doi.org/10.1016/j.drugpo.2018.04.014>.
- [6] Kolla G, Strike C, Watson TM, Jairam J, Fischer B, Bayoumi AM. Risk creating and risk reducing: community perceptions of supervised consumption facilities for illicit drug use. *Health Risk Soc.* 2017;19(1–2):91–111. <https://doi.org/10.1080/13698575.2017.1291918>.
- [7] Palinkas LA, Horwitz SM, Green CA, Wisdom JP, Duan N, Hoagwood K. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Admin Pol Ment Health.* 2015 Sep;42(5):533–44. <https://doi.org/10.1007/s10488-013-0528-y>. PMID: 24193818; PMCID: PMC4012002.
- [8] Polit DF, Beck CT. *Essentials of Nursing Research-Appraising Evidence for Nursing Practice.* 7th ed.. Philadelphia, USA: Wolters Kluwer; 2010.
- [9] Salmon AM, Thein H, Kimber J, Kaldor JM, Maher L. Five years on: What are the community perceptions of drug-related public amenity following the establishment of the Sydney Medically Supervised Injecting Centre? *Int J Drug Pol.* 2007;18(1):46–53. <https://doi.org/10.1016/j.drugpo.2006.11.010>.
- [10] Sandelowski M. Real qualitative researchers do not count: The use of numbers in qualitative research. *Res Nurs Health.* 2001;24:230–40. <https://doi.org/10.1002/nur.1025>.
- [11] Strike C, Jairam JA, Kolla G, Millson P, Shepherd S, Fischer B, et al. Increasing public support for supervised injection facilities in Ontario, Canada. *Addiction.* 2014;109(6):946–53. <https://doi.org/10.1111/add.12506>.
- [12] Timmermans S, Tavory I. Theory construction in qualitative research: from grounded theory to abductive analysis. *SocTheory.* 2012;30(3):167–86. <https://doi.org/10.1177/0735275112457914>.
- [13] Vaismoradi M, Jones J, Turunen H, et al. Theme development in qualitative content analysis and thematic analysis. *J Nurs Educ Pract.* 2016;6(5):100–10. <https://doi.org/10.5430/jnep.v6n5p100>.
- [14] Wood E, Kerr T, Small W, Li K, Marsh DC, Montaner JS, et al. Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *CMAJ.* 2004 Sep 28;171(7):731–4. <https://doi.org/10.1503/cmaj.1040774>.
- [15] Zurhold H, Degkwitz P, Verthein U, Haasen C. Drug consumption rooms in Hamburg, Germany: Evaluation of the effects on harm reduction and the reduction of public nuisance. *J Drug Issues.* 2003;33(3):663–88. <https://doi.org/10.1177/002204260303300308>.