Qualitative Assessment of Patients’ Perspectives and Needs from Community Pharmacists in Substance Use Disorder Management

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Research

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Abstract

Background: Substance use disorder (SUD) is a major health concern affecting Canadians and their health care system. SUD treatment plans addressing patients’ needs and choices have demonstrated improved treatment outcomes. It is essential for health care providers, including community pharmacists, to understand patients' needs and prioritize them. Therefore, this study explores the perspective of patients living with SUD regarding community pharmacist services and the delivery of care in a community pharmacy setting located in the small urban center of, Saskatoon, Saskatchewan, Canada.

Methods: A qualitative methodology was used for this research inquiry. Four focus groups were conducted in Saskatoon, with a total of 20 individuals who had experienced substance use and accessed community pharmacy services. The discussion of the four focus groups was transcribed verbatim and analyzed independently by two researchers. Agreement on the emergent themes was reached through discussion between the two researchers.

Results: Data analysis resulted in four themes that described participants’ perspectives about community pharmacists. The four emergent themes are: 1) experience of people living with SUD in a community pharmacy, 2) services provided by community pharmacists, 3) the methadone maintenance program, and 4) needs from community pharmacists.

Conclusion: There is significant potential for the patient-pharmacist relationship to address the varying needs of patients living with SUD and improve their overall health care experience. Patients who use substances are receptive to pharmacists' services beyond dispensary; however, respectful communication, provision of drug-related information, and counseling are among the primary demands. Future research should focus on studying the impact of meeting the needs of patients on their treatment outcomes.

Introduction

Substance Use Disorder (SUD) is a prevalent disease that affects an individual’s social, physical, and psychological wellbeing. Other difficulties usually co-occur with SUD, such as legal and financial problems, family instability, and unemployment (1). These social situations are both symptoms of SUD and causes that exacerbate the disease. SUD-related problems vary among patients in terms of symptoms, intensity, and responsiveness to treatments. Also, relapse is a common aspect of SUD recovery (2). Relapses can have varying triggers depending on the individual’s experience with substance use (3, 4). Therefore, it is integral that tailored treatments are provided for patients living with SUD that address their etiological and symptomatic variations. Addressing the needs of patients living with SUD, beyond the pharmacological aspects, has been proven as critical to achieving effective treatment outcomes (5, 6).

To properly address patients’ needs, health care services have shifted toward “patient-centered care,” and it becomes one of the main indications of high-quality care services (7). Patient-centered care occurs
when patient choices and needs inform treatment decisions (8). Patient engagement in all decisions concerning their health is the foundation of the patient-centered approach. The Institute of Medicine (IOM) defines a “patient-centred” approach as “care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.” (7). Patient-centered care is not only necessary from an ethical perspective, but it also improves care services, patient’s wellbeing, and enhances overall treatment outcomes (9, 10). A patient-centered approach significantly improves both the pharmacological and psychosocial treatment outcome for patients living with SUD (11, 12) and enhances the level of patients’ trust with their health care providers (13, 14). In fact, the higher the level of trust and confidence patients have in their care provider, the more effective the treatment (15, 16). Health care providers, such as physicians and pharmacists, who interact with SUD patients, need to acknowledge the positive impact of patient-centered care and prioritize patients' needs in treatment decisions.

Community pharmacists are among the health care providers who most frequently encounter clients living with SUD. Those working in a community pharmacy with methadone programs are uniquely positioned to encounter patients with SUD on a daily basis. Easy access and extended working hours make community pharmacists among the most accessible health care providers in Canada. Proximity and accessibility is an impactful combination to initiate and sustain effective strategies to address SUD (17).

Community pharmacists have been successful in achieving the goals of many initiatives directed toward public health safety and harm reduction, such as smoking cessation (18) and diabetes management (19). Therefore we would expect that involving community pharmacists in caring for people living with SUD would similarly be successful by helping with the management and alleviating the negative consequences associated with SUD (20–22). It is critical to closely investigate pharmacists’ relationships with patients living with SUD to recognize opportunities for proper care and harm reduction services. Studies investigating pharmacists’ perspectives regarding SUD found that pharmacists are willing to help and provide services for patients with SUD (23). Also, some pharmacists recognized opportunities in daily practice to intervene and help clients in the early stages of SUD (24).

In addition, the perspectives of the patients living with SUD regarding the services of community pharmacists should also be examined. Although several studies generally examined the overall needs of patients living with SUD (12, 25, 26), very few studies have focused specifically on their perceptions of community pharmacists and pharmacists’ ability to meet their needs (27). Patients’ needs, acceptance of pharmacists’ services, and their expectation of community pharmacists as health care providers is critical to formulating and applying patient-centered care for patients living with SUD.

Therefore, this study explored the perspectives of patients living with SUD regarding community pharmacist services and the delivery of care in a community pharmacy setting. The purpose of the study was to: 1) explore patients’ perceptions regarding community pharmacists’ delivery of care, including harm reduction, counseling, and referral to community/social services; 2) identify services and resources
for patients with SUD in community pharmacies; 3) identify types of services and resources patients want community pharmacists to provide; and 4) explore the barriers patients face while accessing care in a community pharmacy.

Methods

Setting, Recruitment, and Selection Criteria

The study was conducted in the city of Saskatoon, Saskatchewan, Canada. Saskatoon is the largest city in the province of Saskatchewan (population of approximately 275,000) and is known for its high rate of HIV due to substance use (28, 29). Purposive recruitment for patients living with SUD was conducted through community-based and harm reduction organizations that have regular contact with SUD patients, namely AIDS Saskatoon, currently named Prairie Harm Reduction (https://prairiehr.ca/). This organization is devoted to supporting people who are dealing with SUD consequences like HIV, AIDS, and Hepatitis C. A poster outlining the research was distributed through the organization. In addition, a word-of-mouth approach was also used for recruitment (i.e., snowball recruitment). Participants had to be individuals over the age of 18 and current substances users, or individuals who had engaged in recreational substance use in the past two years (illicit drugs and/or prescription drugs) and who have accessed community pharmacy services. Ethical approval was obtained from the University of Saskatchewan Ethics Board (Beh#16–256).

Data Collection

A qualitative methodology was considered the appropriate approach for this research project. Qualitative studies are used to explore and understand in-depth human-related phenomena (30). The focus group was the chosen method for data collection due to its effectiveness in exploratory studies, especially when interaction among individuals is needed to facilitate discussion and to yield a broader range of ideas (31–33). Focus groups have become one of the most frequently utilized data collection methods in primary research (34, 35).

An Interview guide was developed to facilitate the discussion in the focus groups. The questions were carefully designed to lead the discussion towards the areas of interest (Table 1). There was a mixture of open and closed-ended questions that were tailored to be sensitive, clear, and unbiased. The discussion guide was reviewed by two researchers to ensure validity and relevance to research objectives.

Focus Group Procedure

For participants’ convenience, the focus groups took place at a private conference room in a community enterprise center (Station 20) in the west-side core neighbourhoods of Saskatoon. All participants signed consent forms before the focus group. The participants had the chance to ask questions after the
consent form was read and explained to them. Participants were informed about the confidentiality of the research and that no data could be identified or linked to a specific participant. Also, participants were asked to maintain the privacy of other participants and not to share members’ information with non-participants.

Table 1: Focus Group Discussion Guide

| Clarification of Terms | 1) People Who Use Drugs | 2) Community Pharmacist | 3) Pharmacy | 4) Any Others? |
|------------------------|-------------------------|-------------------------|-------------|--------------|
| Introductory Question  | 1) What experiences have you had speaking with community pharmacists? |
| Transition Questions   | 1) Can you identify services and information that are available from a Pharmacist for people who use drugs? |
|                        | 2) Is a pharmacist a good person to get health information or services from? |
| Key Questions          | 1) Think back to a time that you’ve visited a pharmacy in the past and spoke with a pharmacist. Were there any specific reasons why you did or did not feel comfortable speaking to a pharmacist about your care? |
|                        | 2) When you visited the pharmacist, what were the most helpful services or information that a pharmacist provided you? |
|                        | 3) Pharmacists in some countries are able to offer needle exchange, information about HIV or HCV or dispense naloxone. What would be the most helpful services or information that a pharmacist should provide that they don't have now? |
| Final Question         | Is there anything else that anyone feels that we should talk about but didn't? |

The focus group discussion was structured using a written guide to maintain consistency across the multiple focus groups. The same question guide was used in all focus groups. During the focus groups, at least one researcher acted as the moderator to prompt and engage participants in productive discussions while using the questions guide to maintaining focus. At the end of each focus group, participants received honoraria ($25 Tim Hortons [a coffee shop chain] gift cards) for their participation in the research.

Data Analysis

Four focus groups were conducted with a total of 20 participants for an average of one hour per session. All the participants identified themselves as people with experience using substances. All but one were enrolled in a methadone maintenance program. The focus groups were audio-recorded, then transcribed.
verbatim to ensure the accuracy of the data. The number of focus groups was predetermined to be four for this study as a range of 3–5 participants per group is considered an acceptable range (36). More focus groups would have been conducted if the generated data had not been sufficient to formulate robust themes (36–38).

Using NVivo software, inductive content analysis was performed independently by a research team member and a research assistant. The latter was hired as an external researcher to reduce bias and ensure the validity of the analysis. The initial coding sorted the data into themes according to the questions of the interview guide. With a further in-depth reading of the data, subthemes emerged under each main theme. The researchers compared the coding systems and emergent themes. This process was conducted iteratively until agreement was reached. The one team member who initiated the analysis process attended and conducted the focus groups.

Results

Four major themes emerged, and the analysis revealed several recommendations to improve community pharmacy services for patients living with SUD. The four themes provided insights regarding participants' experiences and perceptions of community pharmacists as health care providers. Also, they summarized the participants' needs that went beyond the pharmacological aspects of treatment. The themes also explained the effect of physical space and the community pharmacy setting on the communication between people living with SUD and pharmacists. Finally, the developed themes described participants' experiences with the services provided by community pharmacists, particularly harm reduction services, such as needle exchange and maintenance therapy of methadone.

Experience of people with SUD in a Community Pharmacy

All participants had notable experiences with community pharmacists due to their frequent visits to community pharmacies that ranged between daily to weekly occurrences. Participants' visits to community pharmacies were mainly to obtain their methadone and HIV medications. They described community pharmacists as the most seen health care provider. They indicated that pharmacists are nearby and have long working hours so they can be reached easily. Paradoxically, pharmacists were described by the focus group participants as the health care providers they would be least likely to seek out when help was needed. They elaborated that pharmacists have a busy work environment and hardly reply to their questions or consultations. However, most participants did not recognize community pharmacists even when they have time, as a source for medical information, counseling, or medical advice.

“Participant A - The pharmacist, I never really thought about going to him for support for anything. I always just thought of him as someone serving me just to get the pills and...And, get out.

Participant B – Get your drugs, and that’s it, yeah.” Focus Group 1
The main issues that shaped participants' experiences with community pharmacists are listed as sub-themes:

1. Time:

Lack of time was a core problem often reported by participants. They elaborated that community pharmacists are always busy and do not have time to communicate with their patients. Lack of time for appropriate communication, being too busy, and inefficient multitasking were common themes across all group meetings. In fact, lack of time was the main reason that participants do not seek help and medical advice from community pharmacists. Participants expressed that pharmacists do not have time in their daily routine to provide one-to-one counsel for them.

“Participant A – Probably we don’t go to them, like for counseling or whatever because it seems like they don’t have enough time, [it] seems like they’re so busy.” Focus Group 1

“Participant A – That’s basically the problem, yeah. They’re so busy packaging and looking at their computer. Participants B – Prescribing.

Participant A – Answering phones for the next prescription. They don’t have time to even look at you. And, then when you do get a chance, they’ll start and then...Oh, excuse me I got to get going.” Focus Group 2

2. Profitability:

Participants explained that some community pharmacists could be helpful when they have time, but the business model of community pharmacies pushes pharmacists toward profitability. Profitability is mandated by the companies and forces pharmacists to “push drugs” and limit counseling time with their patients, as explained by participants.

“...They have very, very, very little time to spend with patients. As a matter of fact, zero time to spend with patients because their job is to push drugs.” Focus Group 2

“Participant A – All they care about is the money. They just want the money. And they don’t really care.” Focus Group 3

Also, participants articulated that pharmacists are inefficient multitaskers in that they do not have time to properly counsel patients and provide medication-related information in addition to their many other tasks. This was identified by a number of participants. They perceived that the extent to which pharmacists are required to multitask was harmful to patients’ care, resulting in suboptimal services. For example, several participants reported that the concentration of methadone varies from one time to another because pharmacists are multitasking and cannot stay focused on any one task.
“Participant C - Yeah, in [Pharmacy Name and Location], like that’s a constant problem with me too. There’s always a different pharmacist filling [the] bottles. There’s never one person, and it’s never the same. I’m always finding my methadone’s too, too much.” Focus Group 2

“Participant E – You know, instead of having four different pharmacists doing one methadone...you know methadone for all these people, yeah. It’s never constant, and it’s always, yeah, I, I find sometimes that my, my methadone’s too weak and I get that bone rot. Like, you know, cause yeah. And, it, it...” Focus Group 2

Participants believe that the business and profitability pressures of pharmacy operations affected the way health care services are provided in community pharmacies by hiring a few pharmacists and overworking them. According to the participants, community pharmacists are “overworked, underpaid” workers who are pushed by their companies to make a profit. Having this perspective of community pharmacy services affected patients’ engagement with pharmacists. Participants describe pharmacy services as a money-making business that endeavour to maintain power and control over the patients they serve.

“I truly think it’s a power/control issue. Extremely, that’s what it’s become.” Focus Group 3

3. Consistency:

Participants identified that lack of consistency in pharmacy services negatively affected their experiences in community pharmacies. Participants reported that dealing with a different pharmacist each time prohibits building trust and meaningful relationships with pharmacists. Having different pharmacists providing regular services like methadone, HIV, and Hepatitis C medication prevented the feeling of familiarity with the system and alienated patients.

“Yes, that’s exactly what the problem [is]... There’s always a different pharmacist doing something. Right, one pharmacist for methadone, period. That would be great. That way that pharmacist knows who’s, what, where, how, when and why” Focus Group 2

Lack of consistency in pharmacy procedures was also a concern for participants. For example, it was not clear for participants why some pharmacies would provide them with over-the-counter medications, such as Tylenol One (a medication that contains codeine, an opioid), while other pharmacies would deny it. Similarly, it was upsetting for participants that providing pamphlets with information about their medication and illnesses was not a regular practice at all pharmacies.

“Participant A – You know what is weird...because of my methadone, uh, some pharmacies will sell me ones [Tylenol one], and some other pharmacies will not sell me ones.

Participant B – Yeah, yeah, but, uh, I am wondering how come other pharmacies will sell me them? And, I have asked them too, like, why do you guys do this...like, are you purposely giving me a hard time? Because other pharmacies do it, no problem.” Focus Group 3
“I used to like some of the [Pharmacy Name] pharmacies because they used to have all the pamphlets and everything...all the drugs and all the illnesses...and stuff like that available. Like the one [location of a pharmacy, with street name] doesn’t have it ... I don’t know why but they don’t, but the ones on the east side have pamphlets with the ailments.” Focus Group 1

Participants suggested pharmacies should hire more pharmacists to improve services. Participants believed that if pharmacies were properly staffed, pharmacists would have more time to answer questions, improve consistency, and augment the quality of the provided services.

“You know, it’s, it’s constantly like that. That’s why if they got one pharmacist for the methadone, HIV, Hep C, whatever. Then, that pharmacist is just doing that job and able to answer questions for you. Then, that, I would feel much better about all pharmacists. But right now, when go I see my pharmacist, I got no time for them either. Cause, why? They don’t, they look at you, they sneer their nose down at you, or whatever and then have a nice day.” Focus Group 2

4. Positive Encounters:

It was an interesting observation when participants from different focus groups shared positive stories of the same pharmacists. A number of pharmacists -known by name- were able to provide a positive experience to multiple participants. Polite, genuine, friendly, and caring were the main characteristics of the pharmacists who created positive experiences for participants. Participants perceived that those pharmacists sincerely cared, tried to put their health first, and never let them go without the necessary medications.

“Participant A –certain pharmacies are good, like, it depends on the pharmacist. Like, [Pharmacist Name] was an awesome pharmacist...

I – What, what makes [Pharmacist Name], a good pharmacist?

Participant A – Well, his attitude.

Participant B – He cared about people.

Participants A – He actually cared.

Participant C – He, like, he mingled with the people, you know.

Participant A – He never ever let me go without my medication” Focus Group 2

Services from Community Pharmacists

Participants showed a lack of knowledge regarding the scope of services community pharmacists could provide. It was surprising for participants that community pharmacists can provide services beyond
dispensing medications. The key service or role community pharmacists provided for them has been limited to the dispensing of medications, namely methadone and HIV medications. However, even the dispensary services were reported as suboptimal because of pharmacists’ inefficient multitasking and lack of time for proper communication.

“I always just thought of him as someone serving me just to get the pills and get out”  **Focus Group 1**

“The only reason, the only reason they use a pharmacist…they go get my, my product.”  **Focus Group 2**

The limited understanding of the role, services, and responsibilities of community pharmacists created a communication barrier for SUD patients when accessing pharmacy services. Not knowing about the services pharmacists could provide discouraged participants from seeking help and other services from pharmacists beyond dispensing medication. When a pharmacist offered additional services such as dose adjustment or medical advice regarding their drug regimen, participants felt annoyed as they believed pharmacists were overstepping their role and delaying the dispensary services. Participants stated that understanding the broad scope of a pharmacist’s role would facilitate information exchange between patients and pharmacists.

“I did not even know that they could do all that stuff because ... they never ... showed that they could do all that stuff.”  **Focus Group 3**

“And, the pharmacist will sometimes say that, uh, I really do not think you need this medication, or it should be lowered, or something like that. And I do not think that it is their job to be doing that and when it comes to the doctor ... I mean, when the doctor prescribes it, they should just be following what the doctor orders.”  **Focus Group 1**

However, once participants became aware of the extent of help community pharmacists can provide, they showed interest in accessing such services if offered by community pharmacists. Some participants indicated that their pharmacy uses posters to promote the different services they can provide. Those participants described the convenience of accessing different services through community pharmacies. Stronger relationships appeared to be formed between patients and pharmacists when patients accessed various additional services via community pharmacy.

“Participant A – Well, like at my pharmacy, they post up posters, like, post up like...

Participant B – What they can do?

Participant A – Things that, what they can do and what, what.

Participant C – How they can help.

Participant A – What they’re there for if it makes it easier than going to a doctor.

Participant B – That’s a lot better.
Participant A – Like, even when I’ve been sick when it happened on a weekend when it hasn’t been a doctor, they can look up stuff that…if they can give me something, they can give me something until I can get to a doctor. I think I’ve been through that system three times already and I think it’s pretty good.

Participants C – Yeah, that’s how [Pharmacy Name] in Winnipeg...when I was in Winnipeg, that’s how they were. Like, they’re very like, you know, one-on-one basis. Like, they care for you. Like, they, they, like they knew when something was wrong with me and they come up to me. Because I have mental health issues. And, so they know, like, I’d be off balance and stuff like that.” Focus Group 3

Participants across all focus groups described one specific Saskatoon pharmacy with a higher number of positive comments as compared with other pharmacies in the vicinity. This pharmacy offered multiple services at one location. The “one-stop-shop” was recognized by most participants for its convenience for patients who do not have transportation. It was the only community pharmacy in Saskatoon that has a unique patient-friendly arrangement, whereby participants were able to receive more services than what a usual pharmacy provides, including access to a nurse practitioner, a doctor two days a week, and a counselor. Also, the pharmacists working in that pharmacy were able to provide a positive experience for most of the participants.

“In my pharmacy, we go [to] my methadone doctor comes there on Tuesday. And, we got them nurse practitioners, and then the doctors do come in, and it’s right in the building. And, then it’s open all week too. Other things like drug things, talk to the counselors there, and...we have all of that [Pharmacy Name].” Focus Group 3

“And, then I told him, we need a one-stop-shop. Quit sending us to the east side cause they’re not going to go. Cause they didn’t feel well. And, then so [Physician Name] cut them off. So, we, we tried to relocate it back to...everything back to [Street Name], but they’re being labeled.” Focus Group 2

The Methadone Program

Enrollment in a methadone program was the predominant reason why participants accessed community pharmacy services. Almost all participants had experience with the methadone program, and those experiences appeared to shape their perspective of community pharmacists. Participants were glad to have the advantage of accessing the program that helped them manage their SUD. However, the way the methadone program was operated generated negative feelings and experiences among most participants. Several participants showed frustration with the idea of methadone as a lifelong commitment. They believed that it creates a power disparity where pharmacists “control how [their] health is right now.”

The negative experiences about the methadone program were centred around pharmacists’ attitudes, pharmacy settings, and unclear procedures.

1. Stigma:
Although participants reported few positive encounters, most of the participants’ comments were characterized as unfavorable, describing both stigma and discrimination. Participants felt that pharmacists’ attitudes showed prejudice. Those negative feelings were combined with participants' beliefs that pharmacists do not understand the hardship they are going through to stay on the methadone program. They explained the difficult lifestyle they have as drug users and the significant effects of unforeseen events like a death in the family or a house fire. Despite all their sufferings, patients felt that pharmacists did not offer proper assistance and are finding different reasons every time they visit to cut them off methadone. For example, losing methadone bottles, coming late to their methadone appointment, being rude to pharmacy staff have been reasons cited by a pharmacist to refuse to give them their methadone dose. Participants believed that community pharmacists lack sincere compassion and enact barriers because they are on the methadone program.

“Right. And, you got these people looking at you. Oh, you’re on the methadone program. You’re a user. You’re garbage. That’s how you feel because that’s the response you get from all the people.” Focus Group 2

“No, health region helping us. I have some people hitchhiking on the highway, coming to get their methadone because the pharmacist won’t give them a week or two days or three days.” Focus Group 2

Participants also believed that they are being discriminated against and treated differently than other clients because they are engaged with the methadone program. Participants reported that being on methadone or having HIV or Hepatitis C evokes negative attitudes and behaviors from community pharmacists. Participants expressed that pharmacists’ body language changes once they know that a patient is a methadone client. For example, they feel because they are methadone clients, they are ignored, stigmatized, and pushed aside in favour of serving other clients.

“Participant A – We shouldn’t feel discriminated against because we’re sick, you know. And, a lot of these pharmacists do that. They will look at you, ...like if they know that you’re Hep C or HIV. Right, they’re automatically, like, there are some that just will not touch you. Participant B – They’ll get somebody else...

Participant A – Oh, oh, their, their language, ... eye appearance.

Participant A – Their facial expression.

Participant B – You can feel it.

Participant A – Yeah, you just...Oh god, you’re here. Ok, well, ok, where is my gloves, where’s my hat and... you know, cover up garb or whatever, you know.” Focus Group 2

2. Pharmacy settings:
Pharmacy settings for methadone patients were described as unwelcoming environments that made them feel uncomfortable, especially with pharmacies that designated a separate entrance and space for methadone patients. Using a different back door and dealing with pharmacists through a glass barrier was an upsetting experience for participants. Participants felt alienated, discriminated against, and stigmatized because they had to access their services differently than other clients. In other pharmacies, the situation is less traumatic, but methadone clients were still treated differently and “pushed” aside to wait, unlike other clients.

“You know…even if they had some pictures up, behind [Pharmacy Name], in the back door...there’s nothing to make that person feel comfortable. You are in the cold; you’re in an enclosed space that’s no bigger than this (Participant indicates the size of the space by tracing it out in the room). With a, with a big plexiglass window and that is all you got. There are no pictures. It is always gross on the floor, and you feel like you’re in a prisoner’s box” Focus Group 2

Participants indicated that despite their negative experiences regarding a particular pharmacy setting or pharmacist’s attitude, they did not have the option of getting methadone from another pharmacy. They were forced by their SUD and their doctors’ referrals to access certain pharmacies. Due to their sickness, they needed to utilize a nearby pharmacy, especially when they did not feel well.

Furthermore, the lack of privacy was reported as a communication barrier by different participants. Participants did not like to discuss and share sensitive information about their substance use with community pharmacists in such a public setting. Also, a few participants felt ashamed when a pharmacist discussed their medications and health concerns where others could hear. This behaviour was perceived as a breach of confidentiality.

Participants elaborated that community pharmacies are very busy, community pharmacists are overworked, and that is why patients may be receiving suboptimal services. In fact, participants recognize how challenging the work environment is in community pharmacies. They explained that pharmacists provide services to a wide range of clients and that some methadone clients are rude and obstinate. They understand how stressful it is for pharmacists to validate the information provided by a SUD patient as some patients may provide misleading information to break the rules. It was recognized that pharmacists’ behavior might be justified based on previous negative encounters with other methadone clients. However, participants felt that pharmacists should not judge all methadone clients negatively and should “treat people how [they] want to be treated” Focus Group 3.

3. Unclear Procedures and Policies

Unpredictability and lack of consistency in the procedures for methadone dispensing was a primary concern for several participants. Various reasons were shared as to why pharmacists may refuse to dispense methadone, such as being late for appointments, being rude to the pharmacist, missing daily methadone doses for a couple of days, and losing carries bottles. The worst scenario was when, according to some participants, pharmacists refused to dispense medications without any explanation.
Also, participants reported that pharmacists did not assist participants when they have unforeseen events like travel arrangements to attend an unexpected family funeral. It was not clear for participants what the policies were under such circumstances as pharmacists often lacked consistency in such situations. Participants theorized that pharmacists were prejudiced and enforce policy without caring about their patients.

Participants shared incidents of when they suffered from withdrawal symptoms after receiving their witnessed daily dose of methadone due to inaccurate dosing or because they vomited the dose. Participants explained how they felt abandoned as pharmacists did not help while witnessing their suffering. They explained the pharmacists did not replace their dose until they contacted a doctor. The situation sometimes resulted in the replacement of the methadone dose; however, other times, participants’ doses were not replaced. Participants felt controlled by pharmacists who may find different reasons not to give them their methadone carries – take-home methadone doses - or even their daily witnessed dose. It was upsetting for participants that pharmacists lacked compassion when enforcing policies and regulations.

“They don’t care about the patients. They don’t. It’s all by...based on rules and regulations.” Focus Group 2

“I mean, like, um, for one instance, like, a house of mine burnt and my methadone carries bottles were in the house. They burnt too. The pharmacist on [location] knew about it. Like, it was on the news ... I had to pay back sixty dollars for the bottles plus thirty bottles for my replacement drinks.” Focus Group 2

**Needs from community pharmacists**

Participants’ responses aggregated around three main aspects concerning their needs, namely respect, education, and the needle exchange program.

1. **Respect:**

Participants explained that they wanted to receive respectful communication from community pharmacists, similar to other clients. They expressed that they deserved to be treated with respect, politeness, and care and not to be judged because of their SUD. Participants also described that they would appreciate if pharmacists socialized and engaged in friendly exchanges with them. Genuine understanding and respectful communication were the paramount need reported by participants. However, participants also clarified that it might take some time to build trust and form a relationship with them; therefore, the best way to interact with SUD patients is to be professional, polite, and “do not force it.”

“If I [were] a pharmacist, I would look at each individual case separately and would not judge a person if they are having a bad day. I would ask them, are you ok? I would direct them, you know, if you need someone to talk to, here is a number, you can go here. There is a job there, you know. There is a lot of help out there; you just got to reach out.” Focus Group 4
Finally, participants wanted pharmacists to be sensitive to different cultures, languages, and practices, particularly the culture of the Indigenous peoples of Canada. An Indigenous participant described how great the experience would be for an Indigenous patient if a pharmacist showed a sign of cultural admiration.

“They (referring to First Nations peoples) are all flown here to get their drugs. And, they are just, it is intimidating. It is scary as hell, having a pharmacist there, the pharmaceutical company ready to hop on you. They got a whole team of doctors as soon as they get off the plane. Not one of them speaks their language.” Focus Group 2

2. Education:

Participants acknowledged the need to be educated by community pharmacists regarding their medications, such as toxicity, drug-drug interaction, and drug-food interaction. Health information provision and explanations were one of the main topics discussed across all four focus groups. Learning about SUD and understanding the effect of the medications on functionality was reported as an essential need. A pamphlet (print-out) with information about SUD or where to get help was recognized as a great approach to providing information.

“Participants A - But they got to educate people more on…and give them more information about the drugs people are taking. Instead of just prescribing and giving the person their prescription and, you know, go home and take your meds until they are done. And, you know, if they are prescribed Dilaudid or morphine, well, two weeks down the road they are... they have no energy, they are sore, and they are sweating and everything.

Participant B - But they do not understand why.

Participant A – Yeah, they do not understand why because they did not get the information from the pharmacy when they started taking this.” Focus Group 2

“what drugs interact with each other. I think it is a good idea that they should bring it to the drug addict’s attention. Like say, for instance, this seizure medication combined with this medication, if you are abusing crystal-meth, it will do this to you, just a heads-up, I know it is stupid cause drug...people just think that they are drug addicts and they do not care, who cares to let them know, but it’s important because some of us are diabetic or suffering with mental illnesses like depression ” Focus Group 1

Similarly, participants wanted community pharmacists to learn about the difficulties and social hardships they are going through as drug users. Many participants expressed that they wanted pharmacists to understand how hard it was for them to secure basic needs like food, shelter, and transportation. Participants also believed that community pharmacists needed more education and training on SUDs. According to the participants, pharmacists had a knowledge gap concerning SUDs and HIV; thus, they needed to be further educated in order to better serve patients with SUD.
“They do not know what we are talking about when I am discussing my lab results with them. CD4 count, CD4 count, uh... [Multiple Participants’ Voices] CD4 count and your viral load. They did not know any of that. You know, just looked at me. They are real puzzled.” **Focus Group 4**

3. The needle exchange program:

Several participants described the city’s needle exchange program as a non-effective program because of how it was operated. They elaborated that the operating hours, the quantity of provided syringes, in addition to the limitations of the exchange policy, made the program ineffective when needed. Community pharmacies were not currently providers of the needle exchange program in Saskatoon; however, participants believed they should be. Having community pharmacists involved in the distribution of clean needles would enhance the accessibility of the program, especially on weekends.

“The Health Bus* is done at 11. After 11 and on weekends, you are done. If you do not have a clean rig, well, all of a sudden, you are using one of your used ones. Heaven forbid you would use somebody else’s, but I am sure you would not in this day and age. Or, you are sharpening one of yours. I am it is, it is really quite gross. I could go into it. or [Pharmacy Name] could have it...... could have a mandate of giving out five.” **Focus Group 2**

* Health Bus is a mobile health initiative in Saskatoon. It is designed to bring health care services to people and is staffed with nurse practitioners and paramedics.

**Discussion**

The main goal of this study was to understand the perspectives and the experiences of patients living with SUDs about community pharmacists as health care providers. The findings of the study suggested that the participants’ experiences with community pharmacists are generally negative, with many interactions lacking proper counseling and support. Similar to other studies, lack of pharmacist time, stigma(39), lack of privacy(40), and need for additional education for pharmacists (24) were mentioned by participants among the barriers to accessing care in a community pharmacy setting.

Supporting the notion that the public is often unaware of pharmacists’ full spectrum of services (41, 42), participants shared their limited understanding of community pharmacists’ role beyond dispensing. It is true that community pharmacists are not practicing the full potential of their role in caring for people with SUD(43). Community pharmacists are health care providers who received formal education and training to deliver many healthcare services, such as counseling and referral to services, that go beyond the traditional model of pharmacy that focuses on filling and dispensing medications (44). However, pharmacists are not practicing to their full capacity. Participants reported pharmacists’ lack of time as the main reason for not recognizing or accessing pharmacists’ extended services. Lack of time was also reported in many other studies(45), among other responses like an educational and policy gap. Participants wanted to be educated on their health issues and explore the various treatment options and available services. Participants’ need to receive information and be educated on their health issues was a
common finding in many other studies (46–48). Educating patients about their health issues and illness was related to improved patient satisfaction with pharmaceutical services (49). Also, participants expressed that pharmacists’ attitudes and the stigma toward SUD were a barrier for proper communication. The stigma toward SUD, which has been found to exist among health care providers (39), remains a key barrier to accessing health care services and treatment (50–52). Health care providers, including community pharmacists, should be aware of the stigma, its consequences on people's physical and mental health, and should try to find new methods to limit its negative impact (53).

Another reason for limiting pharmacists’ role to the dispensing of medications may be the standard “ritual” understanding of the pharmacist-patient relationship. The relationship is “ritualized,” meaning that it involves well-known typical interactions. Based on previous encounters, SUD patients may not expect advice or help from a pharmacist concerning their condition, which makes it hard for pharmacists to initiate a conversation concerning SUD. Likewise, it may be challenging for patients to understand pharmacists’ extended role and seek their assistance (54). Pharmacists’ roles and responsibilities should be clearly defined for pharmacists and promoted among patients (55). Also, to change or enhance this relationship, environmental contextual cues like promotional posters and pamphlets would encourage both pharmacists and patients to utilize these services (56).

While patients’ satisfaction is an integral element for patients’ retention and adherence to the methadone program (16), the overall experience of participants with the methadone program in Saskatoon was mostly negative, as articulated by participants in the results of this study. Disrespectful communication, an unwelcoming environment, lack of counseling, and lack of proper information were the primary reasons cited by participants for their negative experiences. Providing counseling and being respectful during patient-pharmacist encounters are referenced as the participants’ primary needs from community pharmacists. Meeting participants’ needs have proven to be critical for positive treatment experiences and subsequent treatment outcomes (57, 58). Evidence indicates that comprehensive substance abuse treatment, which addresses patients’ health and social needs concurrently with pharmacological treatment, leads to a significant reduction in post-treatment substance use and improved patient satisfaction (59–61). Nevertheless, failing to meet patients’ needs in substance use treatment is a persistent problem (62). For example, vocational training, child care, transportation, and housing are among the principal needs that have enhanced patients’ treatment outcomes (12), and many treatment programs still lack an adequate referral system. In addition, linking patients to appropriate health services concerning SUD treatment to address other health and social concerns reduces costly emergency visits (63).

In contrast to the many negative encounters, some pharmacists were able to provide a positive experience for participants. Non-judgmental communication was the prevailing characteristic among community pharmacists who provided positive experiences for participants. This finding supports the integral role of social relations and support for the recovery and treatment retention of patients living with SUD (64, 65).
A significant improvement in patient retention and treatment outcome has been previously linked with receiving advanced services in methadone programs like counseling and social services (66). The uptake of methadone treatment was also significantly improved when it was perceived as accessible, respectful, and desirable by the clients (66). Enhancing the productivity and wellbeing of methadone clients could alleviate the SUD economic burden (67). Further investigation into the policy, procedure, and dynamic of the methadone program is critical to improving patients’ overall experiences and retention rates in the program. Furthermore, the length of treatment was positively linked to abstinence and optimal health outcomes (68, 69). Other reported needs, such as needle exchange programs and education, were commonly identified in the literature and supported by community pharmacists (70–72).

Participants’ observations that pharmacists have a stressful, busy and highly demanding work environment are in agreement with previous studies (73). These environmental situations have negatively impacted pharmacists’ professional performance and often result in negative patient-pharmacist interactions. Organizational support for community pharmacists like clear policies, additional staffing, and an appropriate remuneration model is critical for the overall improvement of patients’ experiences and, eventually, treatment outcomes (74–76). Participants expressed a need to receive respect and tolerance, just like other patients. They also expressed their willingness to discuss their SUD when appropriately engaged. The willingness of the study participants to discuss their SUD with community pharmacists may be regarded as contradicting other findings indicating that patients living with SUD are hesitant to disclose their substance use to health care providers (45). However, participants specified that proper communication and gaining trust over a prolonged duration was key to engaging in open discussions regarding SUD. Similar to other pharmacy clients, participants were willing to explore and access the extended services pharmacists can offer beyond the traditional model of dispensing medications (42, 77). Paradoxically, pharmacists in Saskatoon expressed a great deal of caution and hesitation when approaching suspected SUD patients to offer help (24). In fact, community pharmacists perceived that it might be offensive to the clients to initiate a discussion in relation to substance use (24). On the other hand, pharmacists and patients agree on the need for SUD education with an emphasis on the social attachments of SUD treatment (78) and training on proper communication skills (24).

The following recommendations can be drawn from the current study: there is a need for 1) community pharmacists to become public health advocates and sources of medical advice, 2) training on communication skills for community pharmacists with additional education concerning SUDs and its social elements, and 3) addressing the identified gaps in the policy, dispensing procedures, and practices of the methadone program.

Pharmacists, who are identified as drug experts (79), can play a leading role in addressing and managing patients’ social and health needs. Community pharmacists are easily accessible, trustworthy medical sources, and public health advocates. As such, utilizing community pharmacists to address SUD is expected to have promising outcomes. The literature indicates that community pharmacists are willing to help patients with SUD (21, 80, 81). However, several barriers were identified as significant hindrances for pharmacists’ participation, such as lack of education (82, 83); fear of losing other non-SUD clients as well
as fear of pharmacy staff being harmed (84–86); lack of knowledge about the laws regarding harm reduction services (87); the inability of pharmacists to refer their clients to proper social or health services (88, 89); and lack of time, training, space, and adequate compensation (86, 87). In Canada, pharmacists also mentioned the lack of clear policy as a major obstacle for their increased participation in harm reduction services (90). There is great potential in the pharmacist-patient relationship for early intervention, especially since community pharmacists can be a primary access point to the health care system. Due to their accessibility, community pharmacists can, over multiple visits, engage in discussions with SUD patients regarding treatment plans and different social needs.

There are several limitations to this study. Firstly, the findings of this study cannot be generalized to other settings. However, these findings can give an indication of the needs and barriers people living with SUDs can have in a small urban city like Saskatoon. Also, sampling was voluntary, which may have influenced the outcome of the study. Sampling was mainly through word-of-mouth (snowball sampling); therefore, the sample is not representative of the whole population of people living with SUD in Saskatoon. However, some findings of the study were supported with similar studies in the literature that endorse the support needs and proper exchange of information between people with SUD and health care providers (25, 27).

**Conclusion**

Community pharmacists have a golden opportunity to deliver preventative and harm reduction interventions. Unfortunately, the experience of patients living with SUDs with community pharmacists is often limited to dispensing medications. Patients’ receptivity for the broader range of services community pharmacists can provide are contingent on respectful communication and genuine, friendly and professional conversations. Health care providers, including community pharmacists, should be trained to address patients’ needs while properly delivering patient-centered care for optimum outcomes.

**List Of Abbreviation**

SUD Substance Use Disorder

IOM Institute of Medicine

HIV Human Immunodeficiency Virus

AIDS Acquired Immunodeficiency Syndrom

**Declarations**

**Ethical Approval and Consent to participate:**
This study was conducted after the ethical approval from the University of Saskatchewan Ethics Board (Beh#16-256). Participants provided their signed consent to participate in the study.

Consent for publication:

Not applicable.

Availability of data and materials:

The datasets [i.e., focus group transcripts] generated during and analysed during the current study are not publicly available, but are available from the corresponding author on reasonable request.

Competing interests:

The authors declare that they have no competing interests.

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Authors' contributions:

SF collected and analyzed the data; co-conducted three focus groups and she drafted/revised the manuscript as needed. SF also helped in the design of the study and in securing funding for the project through CRISM.

DB collected data and co-conducted the focus groups with SF and AE; DB also transcribed the focus groups and provided initial rough analysis of the findings. DB provided important suggestions to the draft manuscript.

MD is a co-supervisor of SF, providing input in the various stages of the project particularly data analysis. MD also revised the various version of the manuscripts.

AE is the PI of the project, secured funding for the project, designed the project and is the supervisor of SF & DB. AE conducted one focus group, provided input to the analysis and revised the various versions of the manuscript.

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References

1. Roberts NJ, Fishbein D. An Integrative Perspective on the Etiology of Substance Use. Prevention of Substance Use: Springer; 2019. p. 37-55.
2. Sliedrecht W, de Waart R, Witkiewitz K, Roozen HG. Alcohol use disorder relapse factors: A systematic review. Psychiatry research. 2019.
3. Waldrop AE, Back SE, Verduin ML, Brady KT. Triggers for cocaine and alcohol use in the presence and absence of posttraumatic stress disorder. Addictive behaviors. 2007;32(3):634-9.
4. Staiger PK, Melville F, Hides L, Kambouropoulos N, Lubman DI. Can emotion-focused coping help explain the link between posttraumatic stress disorder severity and triggers for substance use in young adults? Journal of substance abuse treatment. 2009;36(2):220-6.
5. Marsh JC, Cao D, Guerrero E, Shin H-C. Need-service matching in substance abuse treatment: Racial/ethnic differences. Evaluation and Program Planning. 2009;32(1):43-51.
6. Smith BD, Marsh JC. Client-service matching in substance abuse treatment for women with children. Journal of substance abuse treatment. 2002;22(3):161-8.
7. America CoQoHCi, Staff IoM. Crossing the quality chasm: A new health system for the 21st century: National Academies Press; 2001.
8. Barry MJ, Edgman-Levitan S. Shared decision making—The pinnacle patient-centered care. 2012.
9. Stewart M, Brown JB, Weston W, McWhinney IR, McWilliam CL, Freeman T. Patient-centered medicine: transforming the clinical method: CRC press; 2013.
10. Oates J, Weston WW, Jordan J. The impact of patient-centered care on outcomes. Fam Pract. 2000;49(9):796-804.
11. Barrio P, Gual A. Patient-centered care interventions for the management of alcohol use disorders: a systematic review of randomized controlled trials. Patient preference and adherence. 2016;10:1823.
12. Hser Y-I, Polinsky ML, Maglione M, Anglin MD. Matching clients’ needs with drug treatment services. Journal of substance abuse treatment. 1999;16(4):299-305.
13. Hawkins EJ, Lott AM, Malte CA, Frank AN, Hamilton B, Sayre GG, et al. Patients’ perspectives on care management services for complex substance use disorders. Journal of addictive diseases. 2017;36(3):193-206.
14. Bradley KA, Kivlahan DR. Bringing patient-centered care to patients with alcohol use disorders. Jama. 2014;311(18):1861-2.
15. Marchand K, Beaumont S, Westfall J, MacDonald S, Harrison S, Marsh DC, et al. Patient-centred care for addiction treatment: a scoping review protocol. BMJ open. 2018;8(12):e024588.

16. Kelly SM, O’Grady KE, Brown BS, Mitchell SG, Schwartz RP. The role of patient satisfaction in methadone treatment. The American journal of drug and alcohol abuse. 2010;36(3):150-4.

17. Bratberg JP. Opioids, naloxone, and beyond: the intersection of medication safety, public health, and pharmacy. Journal of the American Pharmacists Association. 2017;57(2):S5-S7.

18. Agomo CO. The role of community pharmacists in public health: a scoping review of the literature. Journal of Pharmaceutical Health Services Research. 2012;3(1):25-33.

19. Armor BL, Britton ML, Dennis VC, Letassy NA. A review of pharmacist contributions to diabetes care in the United States. Journal of Pharmacy Practice. 2010;23(3):250-64.

20. Lynas K. Pharmacists can play a key role in implementing new national strategy to combat prescription drug abuse. Canadian Pharmacists Journal/Revue des Pharmaciens du Canada. 2013;146(3):128-9.

21. Cobaugh DJ. Pharmacist's role in preventing and treating substance abuse: Why are we doing so little? American Society of Health-System Pharmacists. 2003;60.

22. Association AP. Pharmacists’ role in addressing opioid abuse, addiction, and diversion. Journal of the American Pharmacists Association. 2014;54(1):e5-e15.

23. Vorobjov S, Uusküla A, Abel-Ollo K, Talu A, Des Jarlais D. Should pharmacists have a role in harm reduction services for IDUs? A qualitative study in Tallinn, Estonia. Journal of Urban Health. 2009;86(6):918.

24. Fatani S, Dobson R, El-Aneed A. Qualitative exploration of the education and skill needs of community pharmacists in Saskatoon concerning substance use disorder. Canadian Pharmacists Journal/Revue des Pharmaciens du Canada. 2019;152(2):117-29.

25. Pulford J, Adams P, Sheridan J. What do clients want from alcohol and other drug treatment services? A mixed methods examination. Addiction Research & Theory. 2011;19(3):224-34.

26. Perron BE, Ilgen MA, Hasche L, Howard MO. Service needs of clients in outpatient substance-use disorder treatment: A latent class analysis. Journal of studies on alcohol and drugs. 2008;69(3):449-53.

27. Dhital R, Whittlesea CM, Norman IJ, Milligan P. Community pharmacy service users' views and perceptions of alcohol screening and brief intervention. Drug and alcohol review. 2010;29(6):596-602.

28. Thomson L. A review of needle exchange programs in Saskatchewan: Final report. Prepared for Population Health Branch: Saskatchewan Ministry of Health. 2008.

29. Jozaghi E, Jackson A. Examining the potential role of a supervised injection facility in Saskatoon, Saskatchewan, to avert HIV among people who inject drugs. International journal of health policy and management. 2015;4(6):373.

30. Marshall MN. Sampling for qualitative research. Family practice. 1996;13(6):522-6.
31. Coreil J. Group interview methods in community health research. Medical Anthropology. 1994;16(1-4):193-210.

32. Rabiee F. Focus-group interview and data analysis. Proceedings of the nutrition society. 2004;63(4):655-60.

33. Twohig PL, Putnam W. Group interviews in primary care research: advancing the state of the art or ritualized research? Family practice. 2002;19(3):278-84.

34. Kuo C, Schonbrun YC, Zlotnick C, Bates N, Todorova R, Kao JC-W, et al. A qualitative study of treatment needs among pregnant and postpartum women with substance use and depression. Substance Use & Misuse. 2013;48(14):1498-508.

35. Zupančič V, Pahor M, Kogovšek T. Focus group in community mental health research: need for adaption. Community mental health journal. 2019;55(1):168-79.

36. Morgan DL. Focus groups as qualitative research: Sage publications; 1996.

37. Kitzinger J. Qualitative research: introducing focus groups. Bmj. 1995;311(7000):299-302.

38. Glaser BG, Strauss AL, Strutzel E. The discovery of grounded theory; strategies for qualitative research. Nursing research. 1968;17(4):364.

39. Van Boekel LC, Brouwers EP, Van Weeghel J, Garretsen HF. Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: systematic review. Drug and alcohol dependence. 2013;131(1-2):23-35.

40. Hattingh HL, Emmerton L, Ng Cheong Tin P, Green C. Utilization of community pharmacy space to enhance privacy: a qualitative study. Health Expectations. 2016;19(5):1098-110.

41. Anderson C, Blenkinsopp A, Armstrong M. Feedback from community pharmacy users on the contribution of community pharmacy to improving the public's health: a systematic review of the peer reviewed and non-peer reviewed literature 1990–2002. Health Expectations. 2004;7(3):191-202.

42. Kelly DV, Young S, Phillips L, Clark D. Patient attitudes regarding the role of the pharmacist and interest in expanded pharmacist services. Canadian Pharmacists Journal/Revue des Pharmaciens du Canada. 2014;147(4):239-47.

43. Compton WM, Jones CM, Stein JB, Wargo EM. Promising roles for pharmacists in addressing the US opioid crisis. Research in Social and Administrative Pharmacy. 2019;15(8):910-6.

44. Jones EJ, MacKinnon NJ, Tsuyuki RT. Pharmaceutical care in community pharmacies: practice and research in Canada. Annals of Pharmacotherapy. 2005;39(9):1527-33.

45. McNeely J, Kumar PC, Rieckmann T, Sedlander E, Farkas S, Chollak C, et al. Barriers and facilitators affecting the implementation of substance use screening in primary care clinics: a qualitative study of patients, providers, and staff. Addiction science & clinical practice. 2018;13(1):8.

46. Cerulli J. Patients' perceptions of independent community pharmacists. Journal of the American Pharmaceutical Association. 2002;42(2):279-82.

47. Chewning B, Schommer JC. Increasing clients' knowledge of community pharmacists' roles. Pharmaceutical research. 1996;13(9):1299-304.
48. Nau DP, Ried LD, Lipowski E. What Makes Patients Think That Their Pharmacists' Services Are of Value?: Convincing patients of the value of pharmaceutical care is as crucial to the profession's transition as convincing physicians and payers. Journal of the American Pharmaceutical Association (1996). 1997;37(1):91-8.

49. Ried LD, Wang F, Young H, Avviphan R. Patients' satisfaction and their perception of the pharmacist. Journal of the American Pharmaceutical Association (1996). 1999;39(6):835-42.

50. Buchman D, Reiner PB. Stigma and addiction: Being and becoming. The American Journal of Bioethics. 2009;9(9):18-9.

51. Interian A, Ang A, Gara MA, Link BG, Rodriguez MA, Vega WA. Stigma and depression treatment utilization among Latinos: utility of four stigma measures. Psychiatric services (Washington, DC). 2010;61(4):373.

52. Room R. Stigma, social inequality and alcohol and drug use. Drug and alcohol review. 2005;24(2):143-55.

53. Smith LR, Earnshaw VA, Copenhaver MM, Cunningham CO. Substance use stigma: Reliability and validity of a theory-based scale for substance-using populations. Drug and alcohol dependence. 2016;162:34-43.

54. Sabater-Galindo M, de Maya SR, Benrimoj SI, Gastelurrutia MA, Martínez-Martínez F, Sabater-Hernández D. Patients' expectations of the role of the community pharmacist: Development and testing of a conceptual model. Research in Social and Administrative Pharmacy. 2017;13(2):313-20.

55. Worley MM, Schommer JC, Brown LM, Hadsall RS, Ranelli PL, Stratton TP, et al. Pharmacists' and patients' roles in the pharmacist-patient relationship: are pharmacists and patients reading from the same relationship script? Research in Social and Administrative Pharmacy. 2007;3(1):47-69.

56. Guirguis LM, Chewning BA. Role theory: literature review and implications for patient-pharmacist interactions. Research in Social and Administrative Pharmacy. 2005;1(4):483-507.

57. Fiorentine R, Nakashima J, Anglin MD. Client engagement in drug treatment. Journal of substance abuse treatment. 1999;17(3):199-206.

58. Fiorentine R, Anglin MD. More is better: Counseling participation and the effectiveness of outpatient drug treatment. Journal of substance abuse treatment. 1996;13(4):341-8.

59. Friedmann PD, Hendrickson JC, Gerstein DR, Zhang Z. The effect of matching comprehensive services to patients’ needs on drug use improvement in addiction treatment. Addiction. 2004;99(8):962-72.

60. Simpson DD, Joe GW, Rowan-Szal GA, Greener JM. Drug abuse treatment process components that improve retention. Journal of substance abuse treatment. 1997;14(6):565-72.

61. Gerstein DR, Harwood HJ. Treating drug problems: A study of the evolution, effectiveness, and financing of public and private drug treatment systems (Vol. 1). Washington, DC: Institute of Medicine. 1990.

62. Pringle JL, Emptage NP, Hubbard RL. Unmet needs for comprehensive services in outpatient addiction treatment. Journal of Substance Abuse Treatment; 2006. p. 183-9.
63. Friedmann PD, Hendrickson JC, Gerstein DR, Zhang Z, Stein MD. Do mechanisms that link addiction treatment patients to primary care influence subsequent utilization of emergency and hospital care? Medical Care. 2006;44(1):8-15.

64. Dobkin PL, Civita MD, Paraherakis A, Gill K. The role of functional social support in treatment retention and outcomes among outpatient adult substance abusers. Addiction. 2002;97(3):347-56.

65. Pettersen H, Landheim A, Skeie I, Biong S, Brodahl M, Oute J, et al. How social relationships influence substance use disorder recovery: a collaborative narrative study. Substance abuse: research and treatment. 2019;13:1178221819833379.

66. McLellan AT, Arndt IO, Metzger DS, Woody GE, O'Brien CP. The effects of psychosocial services in substance abuse treatment. Addictions Nursing Network. 1993;5(2):38-47.

67. Leslie DL, Ba DM, Agbese E, Xing X, Liu G. The economic burden of the opioid epidemic on states: the case of Medicaid. Am J Manag Care. 2019;25:S243-S9.

68. Weisner C, Matzger H, Kaskutas LA. How important is treatment? One-year outcomes of treated and untreated alcohol-dependent individuals. Addiction. 2003;98(7):901-11.

69. Brewer DD, Catalano RF, Haggerty K, Gainey RR, Fleming CB. RESEARCH REPORT A meta-analysis of predictors of continued drug use during and after treatment for opiate addiction. Addiction. 1998;93(1):73-92.

70. Matheson C, Thiruvothiyur M, Robertson H, Bond C. Community pharmacy services for people with drug problems over two decades in Scotland: Implications for future development. International Journal of Drug Policy. 2016;27:105-12.

71. Tesoriero JM, Battles HB, Klein SJ, Kaufman E, Birkhead GS. Expanding access to sterile syringes through pharmacies: assessment of New York's Expanded Syringe Access Program. Journal of the American Pharmacists Association. 2009;49(3):407-16.

72. Winstanley EL, Mashni R, Schnee S, Miller N, Mashni SM. The development and feasibility of a pharmacy-delivered opioid intervention in the emergency department. Journal of the American Pharmacists Association. 2017;57(2):S87-S91.

73. Munger MA, Gordon E, Hartman J, Vincent K, Feehan M. Community pharmacists’ occupational satisfaction and stress: a profession in jeopardy? Journal of the American Pharmacists Association. 2013;53(3):282-96.

74. Greener JM, Joe GW, Simpson DD, Rowan-Szal GA, Lehman WE. Influence of organizational functioning on client engagement in treatment. Journal of substance abuse treatment. 2007;33(2):139-47.

75. Scahill S, Harrison J, Carswell P. Organisational culture: an important concept for pharmacy practice research. Pharmacy world & science. 2009;31(5):517-21.

76. Watson T, Hughes C. Pharmacists and harm reduction: A review of current practices and attitudes. Canadian Pharmacists Journal/Revue des Pharmaciens du Canada. 2012;145(3):124-7. e2.

77. MacKinnon GE, Mahrous H. Assessing consumers’ interest in health care services offered in community pharmacies. Journal of the American Pharmaceutical Association. 2002;42(3):512-5.
78. Kuluski K, Ho JW, Hans PK, Nelson ML. Community care for people with complex care needs: bridging the gap between health and social care. International journal of integrated care. 2017;17(4).

79. Kenna GA, Erickson C, Tommasello A. Understanding substance abuse and dependence by the pharmacy profession. US Pharm. 2006;5:15.

80. Tommasello A. Substance abuse and pharmacy practice: what community pharmacist needs to know about drug abuse and dependence. Harm Reduction Journal. 2004.

81. Schnipper JL, Kirwin JL, Cotugno MC, Wahlstrom SA, Brown BA, Tarvin E, et al. Role of pharmacist counseling in preventing adverse drug events after hospitalization. Archives of internal medicine. 2006;166(5):565-71.

82. Lafferty L, Hunter TS, Marsh WA. Knowledge, attitudes and practices of pharmacists concerning prescription drug abuse. Journal of psychoactive drugs. 2006;38(3):229-32.

83. Kehoe Jr WA. Substance abuse: new numbers are a cause for action. The Annals of pharmacotherapy. 2008;42(2):270-2.

84. Bossak BH, Tempalski B, Friedman SR, Des Jarlais DC. Temporal trends in spatial access to pharmacies that sell over-the-counter syringes in New York City health districts: relationship to local racial/ethnic composition and need. Journal of Urban Health. 2009;86(6):929-45.

85. Matheson C, Bond CM, Tinelli M. Community pharmacy harm reduction services for drug misusers: national service delivery and professional attitude development over a decade in Scotland. Journal of public health. 2007;29(4):350-7.

86. Watson L, Bond C, Gault C. A survey of community pharmacists on prevention of HIV and hepatitis B and C: current practice and attitudes in Grampian. Journal of Public Health. 2003;25(1):13-8.

87. Taussig J, Junge B, Burris S, Jones TS, Sterk CE. Individual and structural influences shaping pharmacists’ decisions to sell syringes to injection drug users in Atlanta, Georgia. Journal of the American Pharmacists Association. 2002;42(6s2):S40-S5.

88. Le PP, Hotham ED. South Australian rural community pharmacists and the provision of methadone, buprenorphine and injecting equipment. International Journal of Pharmacy Practice. 2008;16(3):149-54.

89. Hall S, Matheson C. Barriers to the provision of needle-exchange services: a qualitative study in community pharmacies. International journal of pharmacy practice. 2008;16(1):11-6.

90. N V. Perception on sale of needles and syringes by pharmacies in Kelowna. 2002.