Qualitative exploration of the education and skill needs of community pharmacists in Saskatoon concerning substance use disorder

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Canada is suffering from a rising number of people with addictions. Addiction patients are discriminated against and need support to enrol in proper treatment. Community pharmacists are accessible and skillful professionals who can deliver various interventions to address the issue of addiction and improve its treatment probability.

Au Canada, le nombre de personnes aux prises avec une dépendance augmente sans cesse. Ces personnes vivent de la discrimination et ont besoin de soutien pour entamer un traitement approprié. Les pharmaciens communautaires sont des professionnels accessibles et compétents qui peuvent effectuer diverses interventions pour lutter contre la dépendance et améliorer les probabilités de traitement.

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ABSTRACT

Background: Identifying the skills and educational needs of community pharmacists concerning addiction is critical to improving the services provided for people who suffer from addiction disease (PWSAD).

Methods: Eleven one-to-one semi-structured interviews were conducted with community pharmacists practising in the Saskatoon Health Region, Canada. The interviews were recorded

and transcribed verbatim and verified with the participants. Thematic analysis was employed to analyze the transcripts.

Results: Four major themes were identified: 1) effect of the work setting on pharmacists' encounters with PWSAD, 2) pharmacists' knowledge of key aspects of addiction, 3) level of support within the health care system, and 4) educational and training needs.

Conclusion: Participants indicated that a lack of knowledge and training were major hindrances to improving the quality of the services provided to people who suffer from addiction disease. Additional practicum experience at the undergraduate level and interprofessional interactive educational sessions at the continuing educational level were key recommendations emerging from the study. *Can Pharm J (Ott)* 2019;152:117-129.

Background

Addiction is a growing problem that affects individuals, families and communities worldwide.¹ Globally, the United Nations Office on Drug and Crime (UNODC) estimates that approximately 230 million adults between the ages of 15 and 64 used an illegal drug at least once in 2010, representing 5% of the world's adult population.² Of these, it is further estimated that 27 million people used illicit drugs in a way that exposed them to very serious health problems.²

Canada is no exception regarding illicit drug use and its consequences, with 2.7% of the adult

population experiencing harm due to illicit drug use.² The negative consequences of addiction are not limited to health, affecting also the social and financial well-being of individuals and communities.^{3,4} The Canadian Centre on Substance Use and Addiction reported in 2002 that the use of tobacco, alcohol and illegal drugs cost \$39.8 billion, with the use of illicit drugs alone estimated to cost \$8.2 billion. In addition, prescription drug abuse was reported to be one of the leading causes of deaths in Canada,^{5,6} with a notable example being fentanyl.^{7,8}

Frontline health care providers are expected to address the addiction issues of their patients;

KNOWLEDGE INTO PRACTICE

- Pharmacists are among the most accessible health care providers and may play a key role in addressing the growing disease of addiction.
- The educational needs for pharmacists were explored, revealing a need for educational interventions at the undergraduate and postgraduation levels.

MISE EN PRATIQUE DES CONNAISSANCES

- Les pharmaciens sont les professionnels de la santé les plus accessibles et peuvent jouer un rôle clé dans la lutte contre la dépendance, une affection de plus en plus répandue.
- Les besoins des pharmaciens en matière de formation ont été explorés, révélant un besoin pour des interventions éducatives au premier cycle et aux cycles supérieurs.

however, there is a general inadequacy of education and training of health care professionals regarding addiction, resulting in suboptimal care for people who suffer from addiction disease (PWSAD).^{9,10} We chose to use the term *PWSAD* in this article to describe individuals involved in drug addiction and suffering from its consequences. The research group wanted to refrain from using other terms like *drug addict* due to the stigma attached to this term.

Poorly prepared health care providers will not intervene as effectively and efficiently with PWSAD. They will be less likely to make the right intervention and referral when needed, hindering the utilization of other health services, such as rehabilitation and harm reduction. Improving the quality of available services through increasing the competence level of health providers is a demanding approach in health care, especially as patient care practices are undergoing continuous development to adopt new evidence-based approaches to improve patient care.¹¹ Having well-educated and well-trained health care providers will make it much easier to adopt innovations and guidelines that will save money and lives, as well as improve the general health.

Among community-based health care providers, pharmacists are well positioned to address addiction issues but are often unprepared to deal with the disease of addiction.^{12,13} Although recognition of the need to improve the knowledge and skills of pharmacists regarding addiction has been

a concern for some time,¹⁴ a 2006 study found that the average number of addiction-related educational hours during formal undergraduate training was 2 hours.¹⁵ Drug addiction as a disease and the appropriate ways to deal with PWSAD were absent or limited in most curricula.^{13,15-19}

Pharmacists are among the most accessible health care providers and are trustworthy sources of medical advice.¹² In recent years, the profession of pharmacy has seen significant changes in terms of professional roles and responsibilities,²⁰ with greater emphasis on the social aspects of disease and illness.²¹ As a result, pharmacists can be expected to play a greater role in addiction treatment and recovery. With adequate training and education, it is reasonable to expect that community pharmacists could act as effective mediators between the health care system, social services and PWSAD, leading to an overall improvement in the quality of the provided services.^{22,23} Furthermore, pharmacists who have received addiction-related training were found to be more confident dealing with PWSAD.¹⁵ Using community pharmacists to help PWSAD would be an effective step to address addiction and minimize its consequences. In addition, given their community locations, community pharmacists are well positioned to detect addiction at its early stages, when intervention is likely to be more effective.

This study was meant to be an exploratory investigation with the purpose of identifying the educational and skills needs of community pharmacists to improve addiction management through community pharmacies. The outcomes will advise educational programs and guide future research for addiction educational intervention. We attempted to explore the encounters between PWSAD and community pharmacists, understand their dimensions and the factors involved and interpret the experiences from the perspectives of community pharmacists.

Methods

Research framework

Qualitative methodology was deemed to be the most appropriate research method for the purpose of this investigation. It is also suitable for generating hypotheses for further research on the experiences of community pharmacists caring for PWSAD. Qualitative studies are used to explore and understand human-related issues with no preconceived process about the

TABLE 1 Participant characteristics

Name	Graduation year	Gender	Methadone experience	Management position	Degree
Participant 1	2005	Male	Yes	Yes	Bachelor
Participant 2	2000	Male	—	Yes	Bachelor
Participant 3	2007	Male	Yes	Yes	Master
Participant 4	2006	Female	Yes	—	Bachelor
Participant 5	2012	Female	—	—	Bachelor
Participant 6	2012	Female	—	—	Bachelor
Participant 7	2009	Female	Yes	—	Bachelor
Participant 8	2012	Female	Yes	—	Bachelor
Participant 9	1976	Male	Yes	—	Bachelor
Participant 10	2000	Female	Yes	Yes	Bachelor
Participant 11	2004	Male	Yes	—	Bachelor

phenomena under study.²⁴ One-to-one interviews were used to allow in-depth exploration of the personal experiences.²⁵⁻²⁷

Sampling and recruitment

The study population consisted of registered pharmacists, practising in a community pharmacy in the Saskatoon Health Region in the province of Saskatchewan, Canada. To be eligible for the study, subjects must have experienced at least 1 encounter with a client(s) suffering from substance use disorder during the 4 months prior to data collection. To identify appropriate study participants, a short questionnaire was developed and mailed in February 2014 to the work addresses of all community pharmacists in the Saskatoon Health Region. Pharmacists' work addresses were available publicly through the website of the Saskatchewan College of Pharmacists (<https://saskpharm.ca>). The survey collected demographic information such as age and gender. In addition, various multiple-choice and Likert scale questions concerning addiction practice and education were employed. The intention of the survey was to identify participants for the interviews and set a general notion concerning the scope of the interview. An online option of the questionnaire was also available through FluidSurveys. Based on the Saskatchewan College of Pharmacists' website, the Saskatoon Health Region has 556 licensed pharmacists, of

which 294 were community pharmacists. One month after sending the survey, 124 completed questionnaires were returned. In addition, 6 questionnaires were returned as undeliverable, resulting in a final sample size of 288 community pharmacists, for a final response rate of 40.6% (118/288). Among the 118 survey respondents, 31 pharmacists with at least 1 encounter with a PWSAD agreed to conduct one-to-one interviews concerning addiction.

Selection criteria

For the one-to-one interviews, selection considered pharmacy location, graduation year, education level and gender. Participants who were working in different areas of Saskatoon were selected to capture a wider range of experiences based on the socioeconomic backgrounds of patients and neighbourhoods. Regarding the graduation year, most of the respondents graduated after the year 2000. Educational level was also considered in the selection criteria, with different educational levels desired, as these would provide an opportunity to assess the effect of education on participant practice in relation to addiction (Table 1).

The interviews

Semi-structured interviews were conducted in March and April 2014 with each participant, allowing for focused, conversational 2-way discussions. The choice of one-to-one interviews

was designed to put participants at ease in declaring any information or personal experiences, in contrast to a more public setting, such as a focus group.²⁵ One of the major benefits of this data collection technique is the ability to develop rapport and gain participants' trust, as well as to develop detailed understanding of participants' responses. These interviews were recorded with participants' knowledge and consent.

The interview guide consisted of a list of both open-ended and closed questions derived from the goals and objectives of the study. The same interview guide was used for all participants in an attempt at standardization. The interview guide is shown in Appendix 1 (available online at www.cpjournal.ca). The 1-hour interviews were conducted by the same researcher to ensure consistency in data collection.

Prior to use in the study, the interview guide was piloted and reviewed by 4 members of the College of Pharmacy and Nutrition (2 faculty and 2 pharmacy graduate students). All those who participated in the pilot were practising pharmacists. The question guide was modified based on the responses and feedback provided by the pilot group. Data collected during the pilot were not included in the study.

Ethical approval was obtained from Behavioral Research Ethics Board of the University of Saskatchewan (ethics # Beh 14-20) prior to data collection. Information about the study purposes, objectives and goals was shared with participants and informed consent was read and signed by participants prior to the interview. Data collection was concluded once saturation was achieved.

Data analysis

All the interviews were transcribed verbatim using Microsoft Word. NVivo 10 was used to help in data coding and analysis. Analysis was conducted by the first author and began with open coding by an iterative careful reading of the data. The next step included selecting and naming emerging categories. Through this process, short descriptions were created of the data content and themes. The themes were then merged into refined higher-level themed groups of codes (categories). Data auditing was employed, with themes and subthemes reviewed and audited by an independent auditor, who is external to the research team and did not attend any of the interviews. The external auditor reviewed all

interview transcripts before reading the final themes. After discussion, an agreement on the generated themes was achieved.

Results

In total, 11 community pharmacists were interviewed before saturation was deemed to have occurred. Ten of the participants had completed their bachelor's degree at the University of Saskatchewan and 1 from a non-Canadian school. Four participants held manager positions and were in a position to implement recommendations (Table 1). Participants worked in different community pharmacies, which were located around the city to ensure diversity.

The data analysis and discussions were driven by the identified or suspected substance use behaviour of patients, as speculated on by participants. Four major themes were generated after data analysis. Participants have identified each theme as a major barrier and/or need that would affect their encounters with PWSAD. They also provided suggestions and recommendations to improve the identifiable issues.

- Work environment: Characteristics of PWSAD visiting at the pharmacy
- Knowledge of key aspects of addiction
- Health system resources and support
- Educational and training needs

Theme 1: Work environment—Characteristics of PWSAD presenting at the pharmacy

The work environment was mentioned as a major factor affecting participants' practices, perceptions and experiences in relation to drug addiction. These perceptions and beliefs were influenced by their practical experiences, which are shaped by the work environment. Work environment also affected pharmacists' expectations of the involved community segments in drug addiction behaviour. For example, pharmacists working in affluent neighbourhoods were more vigilant of teenagers' drug abuse, like seeking rubbing alcohol and eye drops, and middle-aged individuals, who seem to be addicted to prescribed narcotics.

In the higher socioeconomic status communities, alarming encounters were less frequent than in lower socioeconomic status areas. The socioeconomic status of the working locations was defined based on pharmacists' own perspectives and experiences—some pharmacists worked in

multiple locations, with varying socioeconomic status. Also, pharmacists who had work experience in small border towns (e.g., Cold Lake) reported border shopping as a method of manipulation and drug-seeking behaviour. Regardless of the work setting, participants reported at least 1 monthly encounter with patients whom they suspected of drug-seeking behaviour, indicating the prevalence of drug addiction in the city. It was clear that work environment affected participants' experiences, resulting in a varied set of expectations and beliefs concerning drug addiction that was augmented with the lack of constructive and informative educational background concerning addiction.

"Depending on the location of the pharmacy, if it's a lower socioeconomic . . . you will see more tie-ins with prescriptions for pain relievers, and tobacco use. . . . You definitely do see customers approaching you who are perhaps under the influence of alcohol, whereas in a pharmacy in this neck of the woods [higher socioeconomic status] you don't see it quite as much."

Despite the varied set of beliefs among participants, they shared similar understanding of alarming behaviours that indicate drug addiction. Regardless of the location, early refills were a major identified red flag for participants. Early refill was more of a challenge and source of confusion for participants because of the high number of inquiries and the difficulty of determining legitimate situations. Painkillers (e.g., Tylenol #1), narcotics and other prescription drugs (e.g., gabapentin) were the most common drugs that alerted participants of addiction-related behaviours. Other drugs were mentioned, such as Mersyndol, an analgesic drug with codeine and dimenhydrinate, an antiemetic drug that produces a "high effect" when mixed with alcohol. Due to the high number of early refill inquiries and the lack of clear policy concerning the right response, participants had a hard time formulating appropriate action. It was challenging for participants to always reject an early refill request as it could be a legitimate need, while at the same time they feared filling a fraudulent request, which could harm the patient. This leads to lack of consistency, as an inquiry for early refill can be rejected by one pharmacist and be filled by another.

On the other hand, one of the helpful work environment resources was the Prescription Information Program (PIP), which aids in identifying those who seek early refills on a regular

basis. PIP allows pharmacists to track prescription drugs, including prescription filling history, which helps them with decision-making, especially with new clients. However, PIP has some gaps when dealing with emergency/hospital prescriptions. Participants indicated that they suspect that clients are using hospital prescriptions to fill the gap between the regular prescriptions provided by family physicians.

In addition to early refill requests, participants identified a number of other alarming signs of potential drug use behaviour, like needle requests and needle marks on patients' arms. Despite the availability of needle exchange programs in Saskatoon, pharmacists found that patients still ask to buy needles from community pharmacies. Requesting a small number of syringes was a common sign indicating intravenous drug injection behaviour. Moreover, body language was another red flag mentioned by participants. Body language includes the way patients talk, eye contact or shakiness. Participants agreed that clients with less eye contact and overly friendly behaviour triggered their suspicions. Also, calling drugs by nicknames was another alarm for addiction. Participants reported that some clients might call drugs by nicknames or street names (e.g., Gaby for gabapentin, Dilly for Dilaudid).

"What I look for in patients is . . . mostly their body language. Not making eye contact, looking for specific items that you can associate with addiction. You know, needles they are looking for, trying to find, usually looking for small quantities, people looking for one needle or 10 needles versus looking for a box of insulin needles."

Theme 2: Knowledge of key aspects of addiction

Despite the genuine desire to provide services to people who struggle with drug addiction, participants appeared to have limited knowledge of how to help these patients. There was lack of awareness of the type of services available to PWSAD and proper management procedures when dealing with PWSAD. Participants' knowledge leaned toward policing and enforcement acts, while lacking the caring, advising and disease management elements. Participants seemed confident with their ability to identify drug addicts and stop fraudulent prescriptions, yet they believe policing is not enough. Participants suggested that as health care providers, community pharmacists

are well suited to provide advice and intervene when help is needed; however, they lacked training on structured and feasible strategies. Pharmacists lack clear understanding concerning key aspects of addiction disease—namely, the definition of the disease, the concept of harm reduction and addiction recovery.

Addiction was inadequately recognized among participants, with emphasis on its physical manifestations (e.g., irrational behaviour and aggressiveness) that feed the notion of stigma and discrimination attached to the disease, while lacking recognition of its social and psychological components. Participants seemed to define addiction according to their personal experiences, which constructed a mainly negative attitude. Clearly, addiction was not recognized as a chronic illness but rather as more of a collection of disapproved behaviours that trigger participants' discomfort. According to participants, addiction ranged from being "benign," describing seniors with physical dependency on their painkillers, to a social phenomenon that drives individuals through a series of poor decisions and negative consequences. Others described addiction as a coping mechanism or self-treating attempts for undiagnosed disease. Generally, narrow recognition of the multidimensional nature of addiction was the common perception. Pharmacists who displayed holistic understanding of addiction were open to providing other services beyond the pharmacological options, such as referral to shelters and to acknowledging the social needs of PWSAD, such as childcare, transportation and food, which could be major barriers to participate in any treatment initiatives.

"Well, like I say, addictions [and] substance abuse are synonymous in terminology, it just depends on how the patient perceives it whether they wish to have assistance to try to get [rid] of . . . it or whether they wish to continue with their habit."

Another important concept is harm reduction, that is, any effort to reduce the negative consequences of addiction on drug addicts or their families—whether by referral, support, providing services or motivating them toward positive change without requesting abstinence.^{28,29} *Harm reduction* was not a new term for the participants, and a couple of them used it during the interviews. However, it was not understood to its full extent. Limited understanding of harm reduction led to fluctuating perceptions

of whether providing harm reduction services is within community pharmacists' scope of practice or not. Drug abstinence was seen by participants as the only outcome of a successful addiction treatment; however, goals for harm reduction vary from controlled use and reduction of negative consequences³⁰ to total abstinence.^{31,32} The majority of participants believed that the methadone maintenance therapy (MMT) (i.e., controlled use) is an appropriate strategy for harm reduction. However, a few participants opposed the idea of controlled use as an outcome goal for harm reduction and were against implementing MMT services in their pharmacies. Such views were justified by stating that the way the program currently operates is by "feeding addiction" rather than treating it. One participant mentioned that some patients were on methadone programs for 10 years without any attempts to reduce their dose to reach complete abstinence.

"Harm reduction in my mind is the methadone program. And I am not a really big fan of the methadone program. . . . You know there is very little attempt to . . . get these patients reintegrated in . . . society properly. Actually, reducing their dose of methadone and getting them off narcotic-based medication . . . that is part of what I don't like with the harm reduction programs and part of the reason why I am hesitant to consider implementing it in my location."

Participants agreed that knowing what to do after identifying a PWSAD was the most challenging aspect of caring for these patients. Participants indicated that PIP is the most useful tool in identifying drug-seeking behaviour, as it allows them to track patients' inquiries and physician visits. A brief review of PIP was enough for the participants to refuse filling a prescription; however, it was not clear to them if the evidence was enough to initiate a conversation concerning drug use and addiction. Despite their willingness to offer help and initiate discussion concerning drug use and addiction treatment, participants preferred to practise caution, so they would not jeopardize their relationship with a patient by insulting him or her. Lack of training on proper communication skills added another level of challenge for community pharmacists who wanted to proceed and intervene to help PWSAD. Pharmacists missed valuable opportunities to care for people who suffer from addiction and alleviate addiction consequences on the community.

“In pharmacy we learned which drugs could cause addiction but . . . there was no training on how we could help people with addiction or refer them to other outside assistance . . . I think we have always been focused more on the pharmacology and the beneficial treatment of medications rather than treating the social psychosocial aspects of it.”

Theme 3: Health care system resources and support

Participants acknowledged that drug addiction is a complex problem and that their individual efforts were not enough to achieve positive outcomes. Participants expressed a desire for more support from the health care system to improve their interactions with identified PWSAD. Supporting the role of community pharmacists as public health advocates and providing a structured management process for community pharmacists to follow during their encounters with PWSAD was a common request among the participants.

“I need to know what the resources are—it’s not about money, it’s not about time, because I can make the time for them. It’s about knowing exactly what programs are out there and I think that is the big thing.”

Participants agreed that one of the most challenging aspects of caring for PWSAD was providing effective referrals to needed services. During the interviews, participants were asked about the process they follow if a client seeks help regarding his or her addiction. The question was intended to stimulate reflection on their professional skills as well as their reaction to the hypothetical situation. The question instead evoked memories of encounters participants had already experienced. Participants’ responses lacked structure and there was no consensus of what should be done; however, looking for resources was one of the major responses.

Participants explained that identifying services that could address the diverse needs of PWSAD was extremely difficult and often indicated that they did not know where to find this type of information. Some participants, especially those with working experience in methadone programs, did know about social services, shelters and food aids; however, the knowledge of those participants about social services was limited. In addition, participants lacked knowledge concerning access to these services, eligibility or how to connect a patient with such services.

Attempts to address such shortcomings were mentioned, with 1 participant indicating the creation of a referral guide in one pharmacy. The referral guide had some numbers and locations for social services, shelters and addiction rehabilitation around the city and was developed through individual efforts searching online for these services. However, this effort was not viewed as particularly effective, as it lacked regular updates and details regarding accessibility and eligibility.

Participants suggested that a lack of promotion of the role of the community pharmacist as health care advocate also hindered opportunities for intervention, especially with PWSAD. They specified the need for awareness programs/campaigns that promote community pharmacists as health care providers who can connect and refer patients to different health and social services when needed. Such campaigns would ease the tension when pharmacists initiate a conversation concerning the patients’ drug-using behaviour. Participants agreed that it required personal effort and time to build good rapport with clients. They believed that if personal efforts were supported with awareness and educational campaigns, or even advertisements through the media about the pharmacists’ role as public health advocates, pharmacy services would be improved. Indeed, participants suggested that community pharmacists are often seen by PWSAD as law enforcement officers or as a gateway to access drugs but not as health care providers. Community educational campaigns were also seen as a feasible solution to reduce community resistance for implementing harm reduction services. Community resistance was highlighted during the interviews as one of the barriers to implement harm reduction services in community pharmacies.

“The reasons why we don’t have larger harm reduction programs are because of public backlash or public misunderstanding about what these services actually are and how they’re helping.”

In addition, participants indicated the possible usefulness of having a protocol or set of management guidelines for addiction encounters. This was seen as particularly critical for the usually time-demanding encounters involving special queries, such as when PWSAD seek help. Participants were willing to invest time and effort; however, pharmacy business and time limitations always acted as barriers. Providing such encounter protocols, which pharmacists

can follow, would probably save time and lead to satisfactory services and outcomes.

There was general desire among participants to have a consistent procedure that would standardize steps and behaviours for pharmacists. Participants reported that it is a challenge to have colleagues with different professional attitudes toward the same inquiry or issue. Therefore, it would be helpful to have a general framework that all practising community pharmacists could use when encountering PWSAD. Participants repeatedly mentioned smoking cessation and methadone program guidelines as great examples of clear guidelines.

“It would be nice if we had a sort of protocol that we could follow. That is why I was interested [to participate in the study], because when you identify those patients and they identify themselves . . . if there is a specific format that is more successful.”

Theme 4: Educational and training needs

Participants believed they were well positioned in the community to provide services and intervene to help people, particularly PWSAD. Extended hours of operations and their familiarity with members of the community were seen to support their ability to build rapport and offer help to individuals with drug use problems. However, participants also indicated that their experience with formal education and ongoing training limited their ability to exploit these advantages. Two main areas of education and training were emphasized—communication skills and information regarding the social factors associated with drug addiction.

Study participants reported that their formal education did not provide them with sufficient training to effectively manage frequent encounters with PWSAD. Participants recalled their formal education focusing on knowledge related to the pharmacological aspects of drugs, side effects, laws and ways to limit drug diversion.

Several participants criticized having police officers as guest speakers in their undergraduate addiction classes. They acknowledged that stopping drug diversion is part of their job as community pharmacists but indicated that their major function is to be a health care provider. These individuals believed that inviting law enforcement personnel to a classroom to talk about addiction was not truly representative of

their roles, and that this inferred that a pharmacist's role mirrored the police officer's job.

A number of participants admitted that their perception of PWSAD had been judgmental and based on stereotypes. However, work experience and encountering PWSAD in the practice changed their views. Participants recognized that PWSAD are “normal” people, who usually have a traumatic history or had an agonizing experience. It was also stated that PWSAD come from a wide range of backgrounds and diverse lifestyles. Practice was an eye opener for most participants and enabled them to appreciate the social elements of the disease.

Participants generally agreed that the educational gap primarily related to the social aspects behind addiction and that this gap left participants unable to understand the critical social side of addiction and how to deal with it effectively. It was noted that participants with extensive working experience in the addiction field—namely, working in MMT programs—displayed deeper understanding of addiction and the close relationship between addiction and social and environmental conditions.

“I really understand where those people are coming from and what impacts them. I certainly believe [this education] needs more than an hour—this needs to be . . . an entire course.”

Some acknowledged the value of the information provided through the continuing education program; however, implementing the information would not be easy without practical training. There was clear expression of a need to acquire skills, not merely information, and that a lack of training had led to inconsistency in the level of competence needed to manage PWSAD.

“Yes, all CEUs [Continuing Education Units] are great, but implementing is something different.”

It also emerged that the preferred method to gain information about addiction was through interactive learning, such as workshops with other health care providers involved in the field of addiction treatment and recovery. Direct and interactive learning sessions with other health care providers and community pharmacists involved in addiction treatment and recovery was the preferred method of learning reported by the participants. Participants indicated that they wanted to hear the experiences of others regarding addiction and how they provided care for PWSAD. Participants recognized their lack

of background knowledge concerning addiction and its multiple factors. In addition, the individuality of situations when dealing with PWSAD made it hard to generalize certain procedures. However, hearing different stories and how care was provided under various circumstances would be a great learning tool.

Interactive education was seen as the appropriate type of educational intervention to help pharmacists manage their encounters with PWSAD. Sharing experiences and stories with other health care providers involved in addiction would broaden pharmacists' views and understanding of the disease. It would also equip them with strategies on how to deal with different scenarios. Furthermore, interactive learning with other health care providers could be a great opportunity to view addiction holistically, which could result in collaboration between different health professions.

"Probably like a discussion, I would like to see some meetings happening between the methadone doctors. Being privy to that would be a big help in widening your view of what the whole picture is. Or even with the social workers and counsellors, just because they see a different view, thinking more the social side of things, their lifestyle and living situations . . . [and] nurses who work at the detox facilities."

Most of the participants cited their methadone working experience as an important learning experience that helped them understand how to identify and provide care for PWSAD. The knowledge gained from working in a methadone pharmacy was mainly from interacting with other health care providers involved in addiction recovery and treatment. One participant reported that working close to a methadone-assisted recovery clinic offered the opportunity to interact with methadone doctors and social workers. The direct contact with physicians and other providers involved in addiction treatment allowed the participant to learn more about addiction management.

Discussion and recommendations

The goal of this study was to investigate the needed education and skills required to improve community pharmacists' services to identified PWSAD. The findings of the study indicate that community pharmacists are well suited to intervene and help PWSAD at the early stages of the disease. However, lack of education and training

on addiction management was a major barrier. The findings also suggest a disconnect between the type of education and training pharmacists receive concerning addiction and the type of services community pharmacists would like to deliver for their clients suffering from addiction. While community pharmacists believe they have the ability to positively affect addiction treatment and recovery and public health in general,³³ the findings of the study indicated that these opportunities are not well exploited.

The inadequacy of addiction education in health care educational programs is not a new observation.^{32,34} Also, understanding the perception of pharmacists and other health care providers concerning aspects of drug addiction, such as prescription opioid misuse, has been the focus of a number of studies.^{35,36} However, in this study, our goal was to identify methods to address the educational gaps from the point of view of practising community pharmacists in the city of Saskatoon. Addressing educational and training needs from the perception of practising pharmacists is expected to reflect feasible suggestions that would positively impact practice. The strategy suggested by participants to rectify the educational gap concerning addiction and improve the services toward PWSAD was to revise both the prelicensure curriculum and continuing education. There was consensus among the respondents that information regarding the social aspects of addiction was the missing element in the undergraduate program. This is consistent with the literature, which identified the need for greater emphasis on social factors to improve attitudes and tolerance toward people with addiction.³⁷ Holistic understanding of addiction was deemed to be critical for any effective treatment or recovery intervention.³⁸ Trauma and environmental situations play major role in the etiology of addiction,³⁹⁻⁴¹ and the findings of the study propose that these are not addressed sufficiently in the formal undergraduate education of pharmacists. Experiential learning at the undergraduate level and interactive learning approaches in continuous education were suggested as the best approaches for addiction education. In fact, participants with methadone experience displayed deeper understanding of addiction and more innovative approaches to care for PWSAD. The methadone experience provided pharmacists with the chance to closely observe the effect of the social

and environmental factors in addiction cultivation, thus potentially enhancing their services and communication skills with PWSAD.

Participants' suggestions for training and early practicum as a prominent educational way to improve attitude, confidence and the competence level among practitioners were supported by the literature.^{34,42} Indeed, studies of various health care professionals found that training was the best way to improve the attitude and adopt new skills to deal with PWSAD.^{43,44} A positive general attitude among practitioners is crucial when caring for PWSAD because, in a participant's words, "It takes only one dismissive or disrespectful [comment] toward somebody to lose them."

The study found that interactive interdisciplinary educational sessions that promote sharing diverse caring experiences with other health care providers concerning addiction were the most desired approach among respondents. Previous studies showed that interdisciplinary approaches were viewed as a successful and beneficial educational approach in substance use and addiction⁴⁵ and that interdisciplinary learning (shared education) tended to offer opportunities for collaboration and sharing resources between different disciplines.⁴⁶ Such an approach would potentially offer better learning experiences for community pharmacist to engage in collaborations with other health care providers and reduce the professional isolation of community pharmacists. Interactivity was another desirable element in educational sessions that would allow participants to enrich their learning experience by discussing their experiences and broaden their knowledge concerning the care for PWSAD. Other studies^{47,48} reported that educational meetings, either alone or combined with other interventions, improve professional practice and health care outcomes for patients. Participants also indicated that interactive educational sessions would open the door to practise new skills and promote behavioural change. Participants' opinions mirrored perspectives regarding physicians' training that interactive continuing medical education sessions are more effective in enhancing practice rather than the regular didactic educational approach.⁴⁹

In the study, addiction education was clearly one area of interest for community pharmacists, as all participants expressed the desire to receive further education concerning addiction.

Participants believe that community pharmacists are well suited to deliver more services to identified PWSAD than they currently do. Yet, the lack of education and training left pharmacists uncertain about their professional role toward PWSAD. It was not clear for participants who wanted to intervene if their intervention was part of their scope of practice. However, working in a methadone program seems to be responsible for a matured perception concerning addiction. Participants who are working in a methadone program displayed understanding of the psychosocial components and close relationship between addiction manifestation and a history of trauma.

If pharmacists want to assume an active role in drug addiction management, the lack of support from the health care system will act as a barrier. Similarly, a barrier will also exist if clients do not recognize community pharmacists as part of the health care system that can help. Pharmacists found it hard to search for available social services and other accommodations due to time restrictions and a lack of resources. It is hard for community pharmacists to initiate a conversation concerning drug addiction with clients who do not see the merit of this conversation and might perceive it as an insulting encounter.

The difficulty of community pharmacists assuming a major role in caring for PWSAD stems from the novelty of the proposed intervention approach, which requires special consideration on different levels, including environmental, personal and behavioural factors. This was clear with the themes that emerged—namely, "Health Care System" and "Work Environment." Although the focus of this study was to investigate community pharmacists' educational and skill needs, other environmental elements emerged as major themes. It is evident that the practice of community pharmacists concerning drug addiction is highly connected with other environmental factors such as the support of the health care system and community awareness of the active role of community pharmacists in drug addiction. A number of studies highlighted similar findings, showing the impact of environmental factors on the practice of pharmacists and other health care providers concerning drug addiction.^{50,51}

Expanding community pharmacists' role in substance use management would have major

implications on various levels, including policy, professional practice, education and training. In fact, standard practice in caring for PWSAD by providing accurate advice and proper referral is projected to reduce the economic burden of addiction on the medical system (e.g., reduce expensive emergency visits of PWSAD). Identifying and treating addiction at its early stages will probably result in more successful outcomes. Thus, community pharmacists' interventions with PWSAD can help, especially when connecting PWSAD with relevant treatment and social programs that could facilitate treatment, such as shelters and addiction counselling. Adequately trained pharmacists can possibly, over the course of multiple visits, motivate patients to initiate addiction treatment.

The study has some limitations, including the lack of detailed responses in the survey, as it was not designed to obtain in-depth information but rather as a recruitment tool. For example, with almost 50% of survey participants reporting "5 times or more" for their monthly encounters with PWSAD, it is not clear what the exact number of encounters was. In addition, it would be useful if a comparison between numbers of encounters and the neighbourhoods had been included. Another limitation is that participants might not display an accurate memory of the number of educational hours concerning addiction received during their undergraduate studies. However, the questionnaire was mainly developed to recruit participants for one-to-one interviews. Yet the response rate was high, which obligated the researcher to draw some descriptive data despite limitation. The study's outcomes reflect the perception of community

pharmacists working in the small city of Saskatoon. In addition, 10 out of 11 participants completed their undergraduate studies in the College of Pharmacy and Nutrition, University of Saskatchewan. Thus, the outcome cannot be generalized to other settings, which may be considered a limitation. Despite these limitations, the study provided a basic foundation for future quantitative research that seeks further generalization and validation.

Conclusion

This work has provided a better understanding of the educational and skill needs for practising community pharmacists in the Saskatoon Health Region (SHR). It is evident that among community pharmacists in the SHR, there is a lack of constructive knowledge concerning the disease of addiction and best approaches to care for PWSAD. Creating a specific module that addresses addiction holistically and highlighting the social and environmental elements in its etiology was identified as one of the major needs at the pharmacy undergraduate level. On the continuing education level, interactive interdisciplinary educational sessions and motivational interviewing training were the major request of respondents.

A follow-up research project is currently being conducted to implement the recommendations that emerged from this research. The educational recommendations will be the content of continuing education workshops for community pharmacists concerning addiction, which will be evaluated for their appropriateness and effectiveness. The findings of this evaluation study will be reported upon completion. ■

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References

1. Degenhardt L, Hall W. Extent of illicit drug use and dependence and their contribution to the global burden of disease. *Lancet* 2012;379(9810):55-70.
2. World Health Organization. World Drug Report 2012. The contemporary drug problem: characteristics, patterns and driving factors. Available: https://www.unodc.org/documents/data-and-analysis/WDR2012/WDR_2012_Chapter2.pdf (accessed Nov. 8, 2018).
3. Rehm J, Gnam W, Popova S, et al. The costs of alcohol, illegal drugs and tobacco in Canada, 2002. *J Stud Alcohol Drugs* 2007;68(6):886.
4. Rehm J, Baliunas D, Brochu B, et al. *The costs of substance abuse in Canada 2002*. Ottawa (ON): Canadian Centre on Substance Abuse; 2002.
5. Fischer B, Rehm J, Brissette S, et al. Illicit opioid use in Canada: comparing social, health and drug use characteristics of untreated users in five cities (OPICAN study). *J Urban Health* 2005;82(2):250-66.
6. Fischer B, Russell C, Murphy Y, Kurdyak P. Prescription opioids, abuse and public health in Canada: is fentanyl the new centre of the opioid crisis? *Pharmacoepidemiol Drug Saf* 2015;24(12):1334-6.
7. Martin TL, Woodall KL, McLellan BA. Fentanyl-related deaths in Ontario, Canada: toxicological findings and circumstances of death in 112 cases (2002-2004). *J Anal Toxicol* 2006;30(8):603-10.
8. McKee G, Amlani A, Buxton J. Illicit fentanyl: An emerging threat to people who use drugs in BC. *BC Med J* 2015;57(6):235.
9. Ewan CE, Whaite A. Training health professionals in substance abuse: a review. *Int J Addictions* 1982;17(7):1211-29.
10. Wyatt SA, Dekker MA. Improving physician and medical student education in substance use disorders. *J Am Osteopath Assoc* 2007;107(suppl 5):ES27-ES38.
11. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. *Lancet* 2003;362(9391):1225-30.
12. Watson T, Hughes C. Pharmacists and harm reduction: a review of current practices and attitudes. *Can Pharm J (Ott)* 2012;145(3):124-7.e2.
13. Kabli N, Liu B, Seifert T, Arnot MI. Effects of academic service learning in drug misuse and addiction on students' learning preferences and attitudes toward harm reduction. *Am J Pharm Educ* 2013;77(3):63.
14. Dole EJ, Tommasello A. Recommendations for implementing effective substance abuse education in pharmacy practice. *Subst Abuse* 2002;23(suppl 1):263-71.
15. Lafferty L, Hunter TS, Marsh WA. Knowledge, attitudes and practices of pharmacists concerning prescription drug abuse. *J Psychoactive Drugs* 2006;38(3):229-32.
16. Watson T, Hughes C. Pharmacists and harm reduction: a review of current practices and attitudes. *Can Pharm J (Ott)* 2012;145(3):124-7.
17. Baldwin JN, Dole EJ, Levine PJ, et al. Survey of pharmacy substance abuse course content. *Am J Pharm Educ* 1994;58:47S.
18. Baldwin JN. Evaluation of alcohol and drug use attitudes and behaviours in pharmacy college faculty, part I: behaviours. *Am J Pharm Educ* 1990;54(3):233-38.
19. Baldwin JN. Evaluation of alcohol and drug use attitudes and behaviours in pharmacy college faculty, part II: attitudes. *Am J Pharm Educ* 1990;54(3):239-42.
20. Tommasello A. Substance abuse and pharmacy practice: what community pharmacist needs to know about drug abuse and dependence. *Harm Reduct J* 2004;1:3.
21. Nkansah N, Mostovetsky O, Yu C, et al. Effect of out-patient pharmacists' non-dispensing roles on patient outcomes and prescribing patterns. *Cochrane Database Syst Rev* 2010;7(7):CD000336.
22. Finley PR, Crismon ML, Rush AJ. Evaluating the impact of pharmacists in mental health: a systematic review. *Pharmacotherapy* 2003;23(12):1634-44.
23. Murphy AL, Phelan H, Haslam S, et al. Community pharmacists' experiences in mental illness and addictions care: a qualitative study. *Subst Abuse Treat Prev Policy* 2016;11(1):1.
24. Marshall MN. Sampling for qualitative research. *Fam Pract* 1996;13(6):522-6.
25. Fylan F. Semi structured interviewing. In: *A handbook of research methods for clinical and health psychology*. 2005:65-78. Oxford, UK.
26. Kvale S, Brinkmann S. *Interviews: learning the craft of qualitative research interviewing*. 2009. Thousand Oaks, CA, SAGE.
27. Seidman I. *Interviewing as qualitative research: a guide for researchers in education and the social sciences*. Teachers College Press; 2013. Teacher College, Columbia University, New York.
28. Erickson P, Butters J, Walko K. CAMH and harm reduction: a background paper on its meaning and application for substance use issues. 2003. Available: www.doctordeluca.com/Library/AbstinenceHR/CAMH&HR03.pdf (accessed Nov. 8, 2018).
29. Marlatt GA, Larimer ME, Witkiewitz K. *Harm reduction: pragmatic strategies for managing high-risk behaviours*. New York: Guilford; 2011.
30. Rosenberg H, Melville J. Controlled drinking and controlled drug use as outcome goals in British treatment services. *Addiction Res Theory* 2005;13(1):85-92.
31. Marlatt GA. Harm reduction: come as you are. *Addict Behav* 1996;21(6):779-88.
32. Marlatt GA, Witkiewitz K. Harm reduction approaches to alcohol use: health promotion, prevention and treatment. *Addict Behav* 2002;27(6):867-86.
33. Agomo CO. The role of community pharmacists in public health: a scoping review of the literature. *J Pharm Health Serv Res* 2012;3(1):25-33.
34. Wenthur CJ, Cross BS, Vernon VP, et al. Opinions and experiences of Indiana pharmacists and student pharmacists: the need for addiction and substance abuse education in the United States. *Res Soc Admin Pharm* 2013;9(1): 90-100.
35. Spitz A, Moore AA, Papaleontiou M, et al. Primary care providers' perspective on prescribing opioids to older adults

- with chronic non-cancer pain: a qualitative study. *BMC Geriatr* 2011;11(1):35.
36. Greenwald BD, Narcissian EJ. Opioids for managing patients with chronic pain: community pharmacists' perspectives and concerns. *J Pain Sympt Manag* 1999;17(5):369-75.
 37. Lalaguna JLP, Ribas CC, Aymerich M. Addictions: a need for specific education. *Proc Soc Behav Sci* 2014;141:160-5.
 38. McLellan AT, Lewis DC, O'Brien CP, Kleber HD. Drug dependence, a chronic medical illness. *JAMA* 2000;284(13):1689.
 39. Zweben JE, Clark HW, Smith DE. Traumatic experiences and substance abuse: mapping the territory. *J Psychoactive Drugs* 1994;26(4):327-44.
 40. Vasse R, Nijhuis F, Kok G. Associations between work stress, alcohol consumption and sickness absence. *Addiction* 1998;93(2):231-41.
 41. Eldred CA, Brown BS, Mahabir C. Heroin addict clients' description of their families of origin. *Subst Use Misuse* 1974;9(2):315-20.
 42. Dole EJ, Tommasello A. Recommendations for implementing effective substance abuse education in pharmacy practice. *Subst Abuse* 2002;23(suppl 1):263-71.
 43. Walters ST, Matson SA, Baer JS, Ziedonis DM. Effectiveness of workshop training for psychosocial addiction treatments: a systematic review. *J Subst Abuse Treat* 2005;29(4):283-93.
 44. Ballon BC, Skinner W. "Attitude is a little thing that makes a big difference": reflection techniques for addiction psychiatry training. *Acad Psychiatry* 2008;32(3):218-24.
 45. Madden TE, Graham AV, Straussner SL, et al. Interdisciplinary benefits in Project MAINSTREAM: a promising health professions educational model to address global substance abuse. *J Interprof Care* 2006;20(6):655-64.
 46. Cleary KK, Howell DM. The educational interaction between physical therapy and occupational therapy students. *J Allied Health* 2003;32(2):71-7.
 47. Saitz R, Sullivan LM, Samet JH. Training community-based clinicians in screening and brief intervention for substance abuse problems: translating evidence into practice. *Subst Abuse* 2000;21(1):21-31.
 48. Forsetlund L, Bjørndal A, Rashidian A, et al. Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2009;2(2):CD003030.
 49. Davis D, O'Brien MAT, Freemantle N, et al. Impact of formal continuing medical education: do conferences, workshops, rounds and other traditional continuing education activities change physician behaviour or health care outcomes? *JAMA* 1999;282(9):867-74.
 50. Kahan M, Wilson L, Wenghofer EF, et al. Pharmacists' experiences with dispensing opioids. *Can Fam Physician* 2011;57(11):e448-e54.
 51. Porath-Waller AJ, Brown JE, Frigon AP. Perceptions among Alberta healthcare professionals of prescription drug misuse. *Drug Alcohol Dep* 2015;156:e180.