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Best Practices: Managing Methamphetamine Withdrawal

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Abstract

Methamphetamine withdrawal has been labelled one of the most challenging withdrawal syndromes by service providers. Limited research has explored methamphetamine withdrawal causing service providers to develop their own strategies and adapt policies and procedures according to client needs. The purpose of this study was to understand and address the unique challenges of methamphetamine withdrawal from the perspective of client and staff experiences. Thirty-four semi-structured interviews were conducted with Withdrawal Management staff and clients in London, Ontario in order to identify common themes. Five themes emerged related to providing methamphetamine users with effective support while trying to maintain the safety and comfort of other clients undergoing detoxification: individualized support, staged integration, education, utilizing a two-tiered approach, and resource and team collaboration. These themes are discussed in relation to the process of detoxification, current challenges, and future directions for detoxification services.

Best Practices: Managing Methamphetamine Withdrawal

The use and abuse of methamphetamine has become a serious public health concern (Brackins, Brahm, & Kissack, 2011) with approximately 50 million methamphetamine users world-wide (Zorick et al., 2010). Consequently, research was needed to provide insight into the effects of methamphetamine. This research has dominantly been conducted in Australia since methamphetamine is a common substance of choice (Pennay & Lee, 2009, 2011) with approximately 3% of the Australian population reporting use within the past year (Pennay & Lee, 2009). More specifically, amphetamines are the second most commonly used illicit drug in Australia (Lee et al., 2007). The incidence of methamphetamine use is increasing on a large scale (Government of South Australia SA Health, 2008), and the United States has also noted a dramatic increase over the past 20 years (Mancino, Gentry, Feldman, Mendelson, & Oliveto, 2011). As an example, a methamphetamine epidemic has been cited in Hawaii, where 18% of patients presenting to a psychiatric emergency department were identified as having a methamphetamine-related diagnosis (Toles, Jiang, Goebert, & Lettich, 2006).

Methamphetamine is a synthetic substance that disrupts the activity of neurotransmitters within the brain (Australian Government Department of Health and Ageing, 2008). It can be found in powder, pill, and crystal form (Pennay & Lee, 2011), and it is a stimulant of the central nervous system (Government of South Australia SA Health, 2006), and thus can cause individuals to exhibit symptoms that are consistent with diagnoses of psychosis, major depressive disorder, and bipolar disorder (Toles et al., 2006). Diagnoses in this context are commonly labelled methamphetamine-induced disorders, and are more common among polysubstance users or those who have pre-existing mental health concerns (Toles et al., 2006).

In addition to methamphetamine-induced disorders, methamphetamine can produce a variety of symptoms while individuals are intoxicated. Its use can result in euphoria, high energy and alertness, with an increase in sex drive and confidence (Australian Government Department of Health and Ageing, 2008; Brackins et al., 2011; Pennay & Lee, 2011). At high dosages, methamphetamine use can produce severe symptoms such as tremors, palpitations, irritability, tension, delusions, auditory hallucinations, and extreme paranoia and panic (Australian Government Department of Health and Ageing, 2008; Baker et al., 2005; Brecht, O'Brien, von Mayrhauser, & Anglin, 2004). When use becomes more chronic, methamphetamine users can experience both psychological and physiological dependence (Zorick et al., 2010). Dependence is associated with lack of sleep, poor diet, and greater susceptibility to harm (Lee et al., 2007), and is found to occur in approximately 10% of regular users (Pennay & Lee, 2011). Methamphetamine dependence has been commonly diagnosed using the DSM IV-TR (Zorick et al., 2010). A positive diagnosis includes dysphoric mood, which is considered the main symptom of amphetamine withdrawal, plus two additional symptoms from the following: fatigue, insomnia/hypersomnia, increased appetite, psychomotor agitation, retardation, or vivid/unpleasant dreams. Nevertheless, methamphetamine dependence is more complex than its diagnostic criteria demonstrates.

Such symptoms are important to understand since withdrawal symptoms can mimic acute intoxication (Lee et al., 2007). However, symptoms of methamphetamine withdrawal are not well studied (Mancino et al., 2011). The duration and pattern of symptoms and the setting most conducive to safe withdrawal are not cited with great rigor; however, some consistencies have been found (Pennay & Lee, 2011). Research suggests the existence of an acute and subacute phase to methamphetamine withdrawal. The acute phase occurs for approximately one week

following cessation of use (McGregor et al., 2005). Dominant symptoms during this phase include an increase in sleep and appetite, with the addition of mood patterns reflecting agitation, anxiety, and depression (Pennay & Lee, 2011). The subacute phase occurs for a minimum of two weeks following the acute phase, where increased sleep and appetite continue. This assertion is affirmed by findings from interviews in outpatient settings where commonly reported symptoms include depression, agitation, fatigue, and cognitive impairment (Australian Government Department of Health and Ageing, 2008; Pennay & Lee, 2011). Other symptoms reported with great consistency include anhedonia, irritability, poor concentration, and marked inactivity (McGregor et al., 2005; Newton, Kalechstein, Duran, Vansluis, & Ling, 2004; Pennay & Lee, 2011). Of greater concern is the presence of psychiatric symptoms.

Both symptoms of depression and psychosis have been noted in cases of methamphetamine withdrawal. The experience of depression is supported by a study using Sprague-Dawley rats, which revealed that reward function decreases in the brain during withdrawal (Miyata, Itasaka, Kimura, & Nakayama, 2011). Therefore, symptoms of depression can continue for weeks, and sometimes even months, following withdrawal (Australian Government Department of Health and Ageing, 2008; McGregor et al., 2005). Similarly, psychotic symptoms sometimes present during the acute phase of withdrawal (Zorick et al., 2010). This phase occurs between cessation of use and onset of the crash phase of the withdrawal syndrome. Methamphetamine-induced psychosis commonly includes delusions of a persecutory nature, hallucinations, and a high degree of suspiciousness, which are often the cause of aggressive behaviour (Glasner-Edwards & Mooney, 2014; Government of South Australia SA Health, 2006). Recent estimates suggest that psychotic symptoms occur in 40% of methamphetamine users (Glasner-Edwards & Mooney, 2014), and dependent users are three

times more likely to display psychotic symptoms (Government of South Australia SA Health, 2006). In addition, psychotic symptoms are more common in clients who inject or inhale vapour (Government of South Australia SA Health, 2006), and those who use base and crystalline methamphetamine (Dore & Sweeting, 2006). Moreover, clients who are vulnerable to mental health problems are more likely to experience an extended form of psychosis during withdrawal (Dore & Sweeting, 2006), or an exacerbation of pre-existing symptoms of schizophrenia (Glasner-Edwards & Mooney, 2014). These conclusions, however, should be interpreted with some caution as the association between methamphetamine withdrawal and psychotic symptoms has not been extensively explored (Zorick et al., 2010).

Furthermore, psychopathology more generally has been found in a sample of regular methamphetamine substance-users at a rate of 49% (Government of South Australia SA Health, 2006). Thus, methamphetamine has the ability to produce time-limited mood disorders, anxiety disorders, and psychotic disorders (Lee et al., 2007). However, it is important to note that levels of psychopathology usually decline significantly within one week of cessation as users approach the crash phase of their withdrawal (Government of South Australia SA Health, 2006; Zorick et al., 2010). Equally important, variability in symptoms has been linked to several factors.

It is suspected that individual factors likely affect the course of withdrawal. The following factors have been cited as causes of variability: the method of administration, the quantity and quality of methamphetamine, the frequency and duration of use, the client's health and expectations during withdrawal, and the client's withdrawal environment (Lee et al., 2007; Pennay & Lee, 2011). More specifically, clients who were older and more dependent on the substance experienced more severe withdrawal (McGregor et al., 2005), as well as those who engaged in a binge-pattern of usage (Lee et al., 2007). In addition, gender differences have been

noted. Data suggest that women may have longer episodes of withdrawal, while males are more likely to engage in extensive poly-substance use (Brecht et al., 2004). These factors should be considered if individuals present to services that support methamphetamine withdrawal.

Withdrawal is the first step of recovery for substance-use disorders (Pennay & Lee, 2011), and in many cases detoxification may not be appropriate to occur within the home. Clients who use methamphetamine more than twice a week in unsafe environments are recommended to undergo detoxification in an inpatient facility (Government of South Australia SA Health, 2008). Yet, not all vulnerable methamphetamine users seek support during this time.

Professional assistance is infrequently sought for methamphetamine withdrawal (Pennay & Lee, 2011). Specifically, only 9.3% of individuals experiencing methamphetamine withdrawal reported accessing treatment support (Pennay & Lee, 2009). Those who did access support were more likely to use injection as the source of administration (Quinn, Stoové, & Dietze, 2013), and typically were either polysubstance users or users who also expressed mental health concerns (Quinn et al., 2013). Thus, it appears that only clients that exhibit characteristics associated with severe withdrawal seek professional support. A suggested explanation for low access is that there may be a high incidence of inadequate understanding of withdrawal symptoms, and therefore, poor management of symptoms in inpatient settings (McGregor et al., 2005; Pennay & Lee, 2011). Methamphetamine withdrawal has only been studied extensively in animals, while human studies typically have been retrospective and have utilized small samples (McGregor et al., 2005). Therefore, greater consideration of the uniqueness of methamphetamine withdrawal in humans is needed.

Methamphetamine users do have a unique presentation and therefore are challenging to support. These challenges have been discovered using semi-structured interviews with

methamphetamine users (Pennay & Lee, 2011), alcohol and drug service providers (Pennay & Lee, 2009), and clients who have chosen to access professional support (Herbeck, Brecht, Christou, & Lovinger, 2014). Clients experiencing methamphetamine withdrawal have been described as erratic, aggressive, and even chaotic, which can adversely impact support during the acute-phase of withdrawal (Lee et al., 2007; Pennay & Lee, 2009; Zorick et al., 2010). As a result, one fourth of clinicians cited negative attitudes from staff as a barrier to supporting this population (Pennay & Lee, 2009). Support is most difficult during the initial peak of the withdrawal syndrome (McGregor et al., 2005), which results in some clients being at risk of harming themselves or others (World Health Organization, 2009). Currently, no pharmacological agent has been designated for symptom management (Pennay & Lee, 2011). Furthermore, most inpatient detoxification units have a standard length of stay between five and seven days (Pennay & Lee, 2011); however, methamphetamine withdrawal exceeds this time-period.

As a result of these challenges, research has begun to explore what special considerations are required when managing methamphetamine withdrawal. Qualitative research has been used to reveal practices that service providers have found effective (World Health Organization, 2009). For instance, many clinicians felt that clients withdrawing from methamphetamine should be separated from other clients (Pennay & Lee, 2009). During the acute phase, the primary concern of staff is to ensure safety and to reduce agitation (Government of South Australia SA Health, 2006). Specifically, it is crucial that staff approach intoxicated clients in a calm environment that is conducive to intake assessment (Australian Government Department of Health and Ageing, 2008), while allowing for greater personal space, and communication that is clear and concise (World Health Organization, 2009). Education about the likely course and duration of withdrawal also assists in successfully supporting clients (Government of South Australia SA Health, 2008).

Moreover, the mental state of clients should be continually monitored and presentation of psychotic, depressive, or anxious symptoms should be thoroughly explored (World Health Organization, 2009). It is strongly recommended that psychotic symptoms are addressed with behavioural interventions (Glasner-Edwards & Mooney, 2014). Furthermore, managing methamphetamine withdrawal requires treatment to be individualized and geared towards a client's presentation (Government of South Australia SA Health, 2008). Following the acute phase, supportive treatment should be psychological in nature to help prevent relapse (World Health Organization, 2009).

Unfortunately, these suggestions are limited in scope when managing methamphetamine withdrawal, and are in its infancy in regards to supportive research (Brackins et al., 2011; Mancino et al., 2011). Withdrawal management is crucial for individuals who are trying to enter recovery, and the probability of maintaining sobriety increases significantly when clients receive supportive treatment sessions during this time (Baker et al., 2005). Over half of a sample of clients identified professional support as conducive to abstinence (Herbeck et al., 2014). Therefore, in order to provide appropriate care, clinicians need to be well-versed in the symptoms of methamphetamine withdrawal and be confident in the strategies that will be used with this population (Government of South Australia SA Health, 2008). Ultimately, evidence-based strategies to guide withdrawal treatment are needed (McGregor et al., 2005; Pennay & Lee, 2011).

The current study explored the unique aspects and challenges of methamphetamine withdrawal, both from the client's and withdrawal management staff's perspectives. It sought to identify common themes that are relevant to successful management of the withdrawal syndrome. Semi-structured interviews were conducted with clients and staff from a Withdrawal

Management Centre in London Ontario, where the organization has identified methamphetamine withdrawal as being the most difficult withdrawal syndrome for staff. This study aims to add to the existing literature in two key ways. First, it will provide insight into the protocols and knowledge that exist about methamphetamine withdrawal in Canada, where Australian research has previously dominated the discourse. Second, it will contribute to the formation of effective withdrawal protocols, where clinicians are educated to respond to methamphetamine users in a standardized manner that is supported by evidence-based practice. Both of these components will be achieved by considering the themes generated in this study. Each theme reflects an effective practice cited by both clients and staff in managing methamphetamine withdrawal. Ultimately, these themes will help guide future research, and if replicated, will help treatment providers better support clients experiencing methamphetamine withdrawal.

Method

Participants and Recruitment

The sample of participants were obtained from a detoxification centre in London, Ontario. Access to Withdrawal Management – Centre of Hope was gained through a prior relationship that was established in a community engaged learning course at Western University in 2016. The manager of Withdrawal Management partnered with the researcher and granted her permission to conduct on-site interviews with both clients and staff. Approval of the use of human participants was obtained prior to data collection from the office of Human Research Ethics on behalf of Western’s Research Ethics Boards (REB).

All participants were staff and clients of Centre of Hope –Withdrawal Management. The centre consists of an 18-bed non-medical residential detoxification facility. Participants were either staff who worked to manage methamphetamine withdrawal or clients who were currently

at the facility undergoing detoxification from a variety of substances (including alcohol, crystal meth, crack cocaine, etc.). No attention was paid to race, ethnicity, or area of residence. All staff were eligible for participation; however, participation was not offered to clients who were still in observation experiencing physical withdrawal. Participation was offered only to clients who had completed physical withdrawal (phase one of the two-tiered system) and had proceeded into programming (phase two of the two-tiered system). Programming consisted of support, assessment, and usually a referral to a residential treatment facility.

A convenience sample was used whereby the researcher recruited participants through the use of announcements, which followed the 9:15am programming session conducted by an addictions counsellor. A scripted explanation of the study and its purpose was provided following the session. Participants were told that the purpose of the study was to better understand methamphetamine withdrawal and how it can be managed effectively within the context of detoxification. Research was conducted twice a week for 8 weeks.

In the case of staff interviews, participants were invited to the manager's office or the staff office to complete their interviews. Similarly, in the case of client interviews, clients were invited to sign up for an interview following the announcement, and were subsequently approached to complete the interview in either the manager or staff office. A letter of information was presented to each staff and client, and the researcher provided a verbal summary of each section. All participants were asked for permission to audio record as well as permission to use anonymous quotes. All participants were then asked to complete the informed consent form. While most participants indicated permission to audio record the interviews, five did not. As a result, case field notes were taken for five interviews. Permission to use anonymous quotes was obtained from all participants except one. Participants were informed that any answers

provided would be kept confidential and all audio recordings would be transcribed by the researcher and then destroyed.

A total of 34 interviews were conducted. In total, there were 34 participants, which included 13 female participants (seven staff, three methamphetamine users, three non-methamphetamine users) and 21 male participants (four staff, eight methamphetamine users, nine non-methamphetamine users). This gender distribution is typical of the organization's staff and clientele. Staff age range was from 25 to 64 ($M = 42.91$, $SD = 12.2$), methamphetamine client age range was from 20 to 53 ($M = 33.18$, $SD = 10.8$), and non-methamphetamine client age range was from 25 to 61 ($M = 41.00$, $SD = 11.0$). All staff had minimum college level education in addictions, and all clients indicated that they have had some kind of previous contact with an addiction related service.

Measurement

Semi-structured interviews were conducted until the point of saturation, which was reached after approximately two months. The study's sample size was characteristic of qualitative research and adhered to general guidelines of saturation (Mason, 2010). The same researcher was present for each session, and she was familiar with the culture of being examined and had extensive knowledge of the ethical principles that guide qualitative research through her academic experiences. In addition, the researcher attended Withdrawal Management for 8 months in 2016, where she sat in on multiple programming sessions and conducted interviews with clients from the centre for her community engaged learning course. Therefore, the researcher was familiar with the culture and vision of the Withdrawal Management Centre and gained experience interacting with both staff and clients.

Guiding questions were used to facilitate discussion in interviews, which dominantly utilized open-ended questions (see Appendix). The guiding questions aimed to reveal staff and client experiences with methamphetamine withdrawal, managing it effectively, and how it impacted other clients who underwent detoxification within the same setting. Additional questions were subsequently added that were found to initiate relevant data (e.g. have you ever witnessed or experienced psychotic symptoms? How did this impact yourself and/or others?). In addition, all participants were asked explicitly about whether they felt methamphetamine withdrawal was or could be managed effectively within the detoxification centre. All participants were also asked to describe methamphetamine withdrawal, and if applicable, their symptoms of withdrawal to gain a better understanding of the environment and whether it was conducive to the recovery process. The only demographic information collected was related to age and sex. Each individual interview lasted between 10 minutes and 30 minutes. Any additional comments and questions were addressed at the end, and all participants were asked if they had something they would like to add about their experience.

Analysis

The researcher transcribed the audio recordings verbatim and typed any case field notes. After the point of saturation was reached, the process of transcribing was completed and the researcher began thematic analysis. First, the researcher thoroughly read the data to gain an overall understanding and to consider all the data that was present. The researcher then generated a preliminary list of possible codes (consisting of one to three words per code) and all transcriptions and case field notes were highlighted and colour coded line-by-line according to these codes. All coding was completed by hand. Finally, the codes were tallied for frequency and grouped into interrelated sets that were used to generate five comprehensive themes that best

represented the descriptions provided by the three groups of participants. This process is typical of phenomenological qualitative research designs (Creswell, Hanson, Plano, & Morales, 2007).

Results

Five themes emerged from the data for outlining effective methods of managing methamphetamine withdrawal in detoxification settings: 1) *individualized support*, 2) *staged integration*, 3) *education*, 4) *utilizing a two-tiered approach*, and 5) *resource and team collaboration* (see Table 1). As revealed by staff and client experiences, the first theme, individualized support, made a significant contribution to the other four themes. Each theme was cited as contributing to the successful management of methamphetamine withdrawal; however, each theme was achieved to varying degrees in the detoxification centre considered in this study.

Broad themes were generated from sets of interrelated elements that were assumed to create the foundation for each overarching theme. Each element was assumed to represent various dimensions of that theme. Some of the elements appeared to be more directly related to a particular theme, while others were more distal. All elements were included in thematic analysis to form a comprehensive appraisal of the data. Discussion of these themes and their underlying elements could provide insight into areas of care in need of improvement and serve to illuminate the effective strategies that are currently utilized within the detoxification centre.

Individualized Support

Individualized support was described by all participants during their interviews and thus has been classified as an overarching theme. While some participants explicitly reflected upon the need for individualized support, others articulated this need through the discussion of elements that were integral to the overarching theme. These elements included a wide range of

Table 1

Summarization of Themes

| Theme | Explanation |
|---------------------------------|--|
| Individualized support | Methamphetamine users require individualized care as a result of unpredictable symptoms, different stages of withdrawal, and the interaction of physical/psychological/environmental factors. In addition, methamphetamine users require more one-on-one counselling and greater monitoring to manage their symptoms effectively, and to increase safety of both clients and staff. |
| Staged Integration | Management of methamphetamine withdrawal would be enhanced by having a separate space for methamphetamine users who display erratic, psychotic, or other disruptive behaviours. This benefits other clients by preventing close contact with distracting and/or frightening symptoms. In addition, it provides greater safety and supervision for methamphetamine users during the acute phase. Once the crash phase is reached, these clients should be integrated into standard observation rooms. |
| Education | Clients and staff need to be educated on methamphetamine withdrawal, its potential symptoms, and the subsequent risks associated with its use. This allows all parties to develop realistic expectations and to have a greater understanding of a client's needs during the various stages of withdrawal. |
| Utilizing a two-tiered system | Methamphetamine withdrawal should follow a two-tiered system where physical symptoms and physical well-being are the focus of phase one, and psychological well-being is the focus of phase two. This ensures the safety of clients when a methamphetamine user is more symptomatic, and allows for the implementation of cognitive-behavioural approaches and motivational interviewing when methamphetamine users are more cognitively responsive. |
| Resource and team collaboration | Teamwork is crucial for the successful management of methamphetamine withdrawal. Staff combine their skill-sets to manage the withdrawal and seek assistance from crisis services, police services, and emergency services when the support required is outside their professional jurisdiction. |

potential symptoms, the desire for more one-on-one support, and the use of frequent checks and monitoring, which increased feelings of safety.

Specifically, methamphetamine withdrawal was consistently described as unpredictable. This lead staff to engage in more frequent checks of their symptoms during the observation period. One staff member stated, “It’s just constant monitoring, and, um, like, what I like to do, I just sort of talk to them, and you know see how they’re doing and where they’re at.” Similarly, non-methamphetamine users felt reassured that the observation rooms were a safe place. One client explained, “There is a window right there. If anything happened, you know (snaps his fingers), they’d be right there.”

In addition, staff acknowledged that many factors contribute to a client’s presentation. For example, staff mentioned that physical, situational, and psychological factors all contribute to the production of symptoms and differential needs. Specifically, one staff member stated:

I think it depends on the person, their lifestyle. Depending on how long the withdrawals last, if they’re on a two week versus a two day binge, how much they’re using, if they’re eating properly, you know, regular routines prior to the crystal meth.

However, staff noted that having a repeat client does not necessarily mean that one can form expectations about how they will present. One staff member discussed that a client’s presentation will always be somewhat unpredictable:

Remember that you’re supporting an individual in withdrawal. It is not the same person every time, you’re supporting that individual on a new high. Though you might expect when they’re in withdrawals or hallucinations or in psychosis, you might have that experience in the past, which is really great because you may have the tools to know what works, but what worked last time may not work this time, so you have to know that

you're dealing with a new individual again. The drug might change, the purity of the drug, whether it is mixed with anything, you don't know. So you really have to learn how to treat it as a brand new high with that individual.

This assertion was reiterated by a methamphetamine client who described his last admission to detox. The client noted that this experience was dramatically different than the rest:

I just remember thinking that the staff here, this was so crazy, this is how cooked out of my brain I was. I was convinced that everyone in my room that was in detox with me was in on it with the cops. And it was crazy; like, I was like, I'm not staying here, you guys are in on this with some sort of conspiracy against me.

Unfortunately, such paranoia and other erratic symptoms require staff to provide individualized support at the expense of other clients. One staff member described the challenges of balancing the needs of everyone within the detoxification unit, saying, "It is disruptive for us because it is taking away our attention from everybody else to being more focused on them because it is something you have to focus on or it gets pretty rowdy sometimes." This concern was also reflected by non-methamphetamine users who utilize detoxification services. The greatest concern was demonstrated for methamphetamine users who have not yet reached the crash phase of their withdrawal syndrome. One client described how a meth user's needs limited staff's availability by saying, "He needs more help than they can give here. And even for the counsellor, yeah, they look after him, but he's a full time job. They got no time for nobody else." As a result, several staff suggested that having more staff on the floor would facilitate the successful delivery of individualized support to all clients.

Staff have also vocalized that sometimes they have to be flexible with policies and procedures to ensure everyone's safety and to accommodate individuals who are unable to settle.

One staff member mentioned that some methamphetamine clients need an outlet to reduce their energy: “He kept pacing the hall and I asked him to maybe try to do some colouring or do some journaling.” This accommodation was appreciated by a lot of the clients. A non-methamphetamine user described that, even though it can be difficult, he supports adapting the system to allow recovery for any substance-user who requires support:

If there are any problems within the rooms with any clients, they will usually do what’s in the best interest of your recovery, and if someone is disrupting your recovery, they will find a solution that best fits everyone . . . and I know I wouldn’t want to go through that or be neglected from detox because of different withdrawal symptoms that are more severe.

Similarly, staff also must adapt the two-tiered system to methamphetamine users since they may be intoxicated or in the “tweaking phase.” Consequently, a staff member stated that they had to extend the period of time these clients reside in observation: “We only really accommodate the physical part for a few days, whereas methamphetamine can be a few weeks.”

Staged Integration

The need for staged integration was identified by all three groups and was cited as a potential solution to some of the dominant challenges. Both staff and non-methamphetamine users recognized that methamphetamine withdrawal can disrupt the process of recovery for other clients. For instance, one non-methamphetamine user described how sharing rooms can be an obstacle in the recovery process:

It’s just a completely different animal. For me, with the alcohol withdrawal, you just want to focus on lying in bed and getting through the worst part of the withdrawal, and

they're the complete opposite – they're up and go go go. So it kind of contradicted what I was trying to do and my purpose for being here.

Specifically, factors that emerged under this theme were the realization that methamphetamine users can disrupt client sleep, distract other client's from their recovery, and cause other clients to feel uneasy and scared. One client described her experience with a methamphetamine client and said, "He was bouncing off the walls, swinging his belt around, his keys around, kneeling on the floor taking his clothes off. Oh yeah, he was scaring the heck out of me." Similarly, other non-methamphetamine users felt that their mental health had been affected. One client stated:

I am far more anxious. You know I come in with my baseline anxiety, and then there's the anxiety that comes with my own detoxification, and then if you add this outside agent, this crystal meth detoxification, it can be a very bad recipe.

When non-methamphetamine users were asked, "If another client entered detox and was unfamiliar with methamphetamine withdrawal, what would you tell them?", many clients provided similar answers. Many clients emphasized keeping to themselves and waiting for the disruptive symptoms to pass:

Just try to focus on yourself and weather the storm, which I don't think is something that you should have to say, weather the storm when you're supposed to be in a safe place, but I guess that would be the advice I give.

These negative effects on other clients are recognized by staff members. One staff member noted that it is not uncommon for non-methamphetamine users to express concerns, ask questions, or even ask to leave if a client is not removed from the unit:

One client who was sleeping and another client who was high on crystal meth had lied on his chest and he woke up and he said I am going to stab you while you're sleeping. They

don't want to stay here when we bring these people in, and it's so sad because they need help.

As a result of these challenges, many staff try to provide as much separation as they can. However, when they are still intoxicated or in the "tweaking" phase, it can be difficult to accommodate them. Currently, this detox centre will sometimes use their swing room or their lounge area if a client's behaviour is notably erratic or psychotic symptoms become too disruptive; however, this prevents the other bed in the swing room from being filled. The manager at the detox centre expressed the hope to eventually expand the unit so that methamphetamine clients could be separated:

If there was a secondary area not to really segregate them but to allow us to meet them where they're at and better address the unique challenges that they face, that would go a long way in helping my staff care for them better.

Other staff members also felt this was something that should be considered a best-practice. All staff members agreed that there would be benefits to having greater space to manage methamphetamine users. One staff member expressed this would also increase the safety of the user:

We need a specialized area for them. I am not trying to be rude about it, but if we have a padded room because they flail. For some of them, it almost seems as if they are in a constant seizure activity. And since there is only two of us with eighteen beds, and when one of these clients come onto the floor, they need all of our attention.

The idea of separation has also been considered among methamphetamine clients. The following comments were made by methamphetamine users: "I think in the worse cases there needs to be separation" and "Maybe there should be just a clinic for meth addicts?" In addition, one

methamphetamine client realized that she found it difficult to be around others and felt that she may have caused some clients to feel as though they needed to “tiptoe” around her:

I sleep a lot when I am coming off of it. It really affects the people around me. You know, they don't always want the lights to be on and they can get a bit noisy and rowdy, and I can just be like STOP IT and get very frustrated and throw a bit of a tantrum.

Fortunately, staff have found that the “crash phase” presents minimal difficulties since clients just dominantly sleep and increase their food intake. Other clients have also considered this difference:

When they're at the crash phase, it is fine. I am happy to watch them, I know they'll just sleep and sleep and eat. And I am just so happy when they get up and eat and then go back to sleep, and I know they're on their path to recovery.

Thus, these clients could effectively be integrated with other clients once the crash phase has been reached when the methamphetamine-user is no longer in the acute-phase of withdrawal.

Education

Education was another theme that emerged from discussions with clients and staff members. Even though most staff felt confident in their ability to manage methamphetamine withdrawal given their space and resources, most alluded to the importance of staying current with research on methamphetamine and trends within the community, and using their skills to de-escalate situations. Staff members also emphasized that education was important for clients and sometimes they needed to provide information to the users so that they were more cognizant of the potential effects: “I think a lot more education needs to be brought out for people to learn about the side effects, the harm, or the magnitude of the effects, both on the body and the mind.”

This need for greater education was expressed by methamphetamine users who did not realize the significant impact meth would have on their brain and cognitive function:

It just really screws your brain up, it really does. And I didn't even know that until I was in it . . . the longer you're doing meth, it just fries you. The one guy is just fried, and he can't help it. It just changes you; you can be black and then you can turn white.

Another methamphetamine user reflected that many individuals do not have significant knowledge about the effects or the resulting withdrawal because the availability and affordability of the drug is what hooks individuals:

Realizing, you know, it's a matter of life and death because it's like Russian roulette with that stuff. You know? And it's it's like available, and you could like throw a stick and find like five, ten people who have it.

Another methamphetamine user was unaware that meth was being cut with opioids, which increases the risk of overdose and said, "I was quite surprised with it to be honest with you. Like all the stuff that it is being mixed with like fentanyl." Similarly, when a methamphetamine user was asked if their withdrawal could be managed effectively, they provided this response:

I think there's still a lot to be learned. Especially because the methamphetamine is changing all the time. I am quite surprised with some of the things I read on the bulletin board and what is being put into it. I couldn't believe it. I think it's being managed the best it can for now until they figure out more.

Many non-methamphetamine users expressed that they also would have liked to receive greater education on methamphetamine withdrawal when entering detoxification. One client said that for future clients it would be helpful for the following to occur:

Maybe knowledge during the intake. Even if someone, like a counsellor, saying, you know, you'll be dealing with people going through drug withdrawals, as well as alcohol, and here are the differences, so expect them to be, and give the list of, like, agitation, etc. so I wouldn't be so shocked when I see a person having a conversation with the window, you know? Because I thought it was a big mental health issue. And there probably is underlying factors, but that is what I thought. I didn't realize it was because of the methamphetamine.

Utilizing a Two-Tiered Approach

Utilizing a two-tiered approach was another theme that emerged during interviews with clients and staff. At the detox centre, it is standard practice for clients to complete observation where they undergo physical withdrawal under the constant supervision of staff, and then they're transferred to programming where they participate in psychoeducational groups, complete provincial assessment using the GAINS screener, and plan their next phase of recovery. After speaking with clients, it was revealed that not all detoxification units have this two-tiered approach; however, it seemed to be preferred. One client stated, "I really like the combination of detox and program – that is my favourite part."

Redirection and Active Listening. Both redirection and components of active listening were described as being integral to the successful management of physical withdrawal during the observation period. Staff emphasized that the intake process with methamphetamine clients required some adaptation and that it was important to have realistic expectations of their abilities. Specifically, one staff member said:

Oftentimes I found when I'm doing an intake with someone who's high on crystal meth, I think it is easier to keep it as basic as possible and leave the details of the intake for later on. A lot of redirecting with these clients. Just one-on-one.

Again, redirection was commonly used to describe supporting methamphetamine clients in an appropriate manner: "They need a lot of redirection and reminders of why they are here, just helping them stay focused on what they need to do." Specifically, redirection was often the term used to delineate approaching clients in a clear, concise manner that is respectful and provides them with a direction. A staff member described their approach, saying, "It's really about being clear and to the point so that they don't get confused because their brains are already working a thousand miles a minute."

Similarly, methamphetamine users also described this approach as helpful in providing support, especially since mood swings and rapid thoughts were cited with great rigor. One client emphasized, "I think it is pretty important to, uh, come at the person pretty calm and a soothing manner or whatever. Because, I don't know, it's one of those drugs where anything will set you off." Many methamphetamine users acknowledged that they are often unable to take a step back and evaluate a situation critically during this point of withdrawal. One client described an incident where he had lost his composure: "Like we have bad times, like I will flail and freak out on staff. Like yesterday, this one staff – he is a good man and has always been respectful – and I lost it on him." Thus, using the observation period to address physical symptoms only, is well-suited for the acute phase of methamphetamine withdrawal.

Supportive Psychological interventions. Supportive psychological interventions are best instituted after the majority of physical withdrawal symptoms subside. Many clients alluded to programming as being the period in which they focused on the psychological effects of

withdrawal. Specifically, one methamphetamine user described his thought processes using the following comparison:

I couldn't get my head straight, like my thoughts were mumbling all over the place. Like if you open a pack of marbles and throw them on the ground, they all go in different ways. And I felt like every marble that went a different way was my body being ripped to shreds from me, you know.

In addition, non-methamphetamine clients expressed that methamphetamine clients displayed very different behaviour during programming and thus could effectively participate. One client provided the following description: "I have seen it first hand, people coming in here really high on crystal meth, and coming down and what not, and then they get moved to program and it's almost like a complete three-sixty with them." Similarly, another non-methamphetamine user indicated that during programming everyone was at the same stage of recovery:

Once everyone goes through the initial stage and gets some of that fog out of your head, then it's, yeah, everyone is pretty approachable and decent. It doesn't matter if you're an alcoholic or into methamphetamines, we all kind of share a life, right.

However, methamphetamine clients are more likely to display symptoms of depression. Consequently, symptoms of depression need to be thoroughly explored and addressed during this phase of withdrawal. One client described this experience after completing the first phase of detoxification:

With meth it's like first it's you just can't sit still, you're agitated, and then second comes depression. You just can't think of anything else, you're just depressed. And it's, like, not like typical sad day, it's like I want to shoot myself in the brain type deal.

Fortunately, many of the staff are also educated in mental health and are able to address mental health issues that are either exacerbated or that present as a result of the withdrawal syndrome.

The manager expressed that methamphetamine users are chemically unable to feel happy:

At the end, when they're actually in withdrawal, they have essentially lost all their dopamine, serotonin, and don't feel happy. And it's even harder to motivate them to seek sustainable recovery because they can't find a reason to be happy. Because chemically they can't be happy.

As such, it is important to address these symptoms when clients are able to participate in meaningful interactions, and are cognitively responsive.

Resource and Team Collaboration

The need for resource and team collaboration was a recurring theme during discussions with clients and staff. Many staff discussed the importance of teamwork within the detoxification unit and the importance of utilizing each staff member's skillset when managing challenging situations. One staff member provided the following description when asked how staff manage methamphetamine withdrawal:

You know we work together. Even reassuring the other clients that we know what we're doing. You know if something were to happen, we have backup resources . . . when we need to come together, we come together quite strongly.

Another staff member noted that they are aware of their capabilities and when their service is no longer a suitable support for a client, stating, "If their behaviour is too erratic and too disruptive to everyone in the unit, it's probably better that they're not here and find them another support that they can use within the city." This seemed to be an effective practice, as one methamphetamine client revealed through his own experience, explaining, "Depression this time

around to the extreme, they actually had to call the crisis care because I was pretty low.” One staff member also described how greater resource collaboration would be beneficial to ensure the well-being of methamphetamine clients, to educate, and to prevent the spread of communicable diseases: “We need more supports, like doctors, nurses, especially with the withdrawals, the infections, their skin. If we don’t have a whole team, it is hard to keep everyone on the same page and to move forward.”

This description reflected the words of the detox centre’s manager who emphasized that the community needed a faster, more coordinated response to the methamphetamine crisis, stating, “I think we are lagging in our response to crystal methamphetamine and I think unfortunately we’re not going to react as a community until it’s too late.” Until this greater collaboration occurs, the detox in London seems to be accepting methamphetamine users that other services do not know how to support:

We had LPS even come with clients and tell us, like, we don’t know what to do with them. We don’t want to put them in a cell because they’re going to be a danger to the other individuals – can you work with them?

A non-methamphetamine user has also noticed the need for greater community collaboration. The client described seeing a methamphetamine user outside a store who displayed erratic and disruptive behaviour:

The cops came and they did nothing with this individual except get him away from the store. So they just want him to go and wander the street. So the cops don’t want him, the hospital don’t want him, send him to detox, and detox take them, but really struggle to handle them. So it’s like, well, I am at a loss.

Therefore, a coordinated response to the methamphetamine crisis needs to be established, and greater resource collaboration would ensure that client needs are adequately addressed.

Discussion

The purpose of this phenomenological qualitative study was to understand how methamphetamine withdrawal could be managed effectively within detoxification centres. Interviews were conducted with 11 staff members, 11 methamphetamine-users, and 12 non-methamphetamine users at a withdrawal management centre in London, Ontario. Five themes emerged through an inductive process, which included: *individualized support, staged integration, education, utilizing a two-tiered system, and resource and team collaboration*. When staff and clients were directly asked if methamphetamine withdrawal was currently managed effectively almost half (47%) of the participants felt it was managed effectively within the current detoxification unit, while the other half (47%) believed it could be managed effectively if methamphetamine users were separated until the “crash phase” where they could receive more individualized care. Only 6% of participants indicated that they thought it could not be managed effectively. Consequently, the themes discussed in this paper outline successful strategies that are currently utilized, as well as future directions that would produce an environment that is more conducive to recovery and feelings of safety.

The findings from the present study suggest an overarching theme of individualized support since methamphetamine users present to detoxification units at various stages of the withdrawal syndrome. This includes clients who have not reached the “crash phase” and therefore exhibit unpredictable symptoms. Such symptoms were described by both staff and clients and were consistent with previous descriptions of the acute phase of withdrawal (McGregor et al., 2005; Pennay & Lee, 2011). Such unpredictability is the result of an

interaction of physical, psychological, and environmental factors (Lee et al., 2007; Pennay & Lee, 2011). As a result, methamphetamine users require more one-one-one counselling, more frequent monitoring, and an extended period of support during the observation period. Support needs to be adapted to each client's unique presentation, and thus individualized support aligns with previous findings (Government of South Australia SA Health, 2008; World Health Organization, 2009). However, both non-methamphetamine users and staff stated that individualized support occurs at the expense of other clients. Thus, more staff are needed to ensure adequate care is provided to all clients. Therefore, having access to three staff members should be considered a best-practice. This would allow one to manage observation, one to manage programming, and one to be a floater and assist with clients who may require more support. Ultimately, this would ensure that all clients' needs are met, while increasing feelings of personal security of both staff and clients within the unit.

Similarly, management of methamphetamine withdrawal would be enhanced by having a separate space for methamphetamine users who display erratic, psychotic, or other disruptive behaviours. Separation was revealed in the literature (Pennay & Lee, 2009), and thus should be considered a potential best-practice. Specifically, 47% of the participants in this study identified separation during the acute phase as crucial to the effective management of methamphetamine withdrawal. The theme of staged integration is closely related to the need for individualized support since separation would not be effective without balancing the needs of all clients, having access to more staff to supervise the separate space, and to monitor and assess when integration is suitable. Separation benefits other clients by preventing close contact with distracting and/or frightening symptoms, while also providing greater safety and supervision for methamphetamine users. Moreover, integration after the acute phase prevents methamphetamine users from

developing increased feelings of isolation and depression. Thus, staged integration is required to support all clients, and should be implemented if resources are available.

Furthermore, clients and staff need to be educated on methamphetamine withdrawal, its potential symptoms, and the subsequent risks associated with its use. This allows all parties to develop realistic expectations and to have a greater understanding of a client's needs during the various stages of withdrawal (Government of South Australia SA Health, 2008). Staff who had greater knowledge and training about mental health and methamphetamine withdrawal were more confident in their ability to manage this withdrawal syndrome effectively (Pennay & Lee, 2009). Thus, mandatory training and info sessions for staff in detoxification units should be considered a best-practice. Similarly, reiterating this information to all clients helps to increase understanding and feelings of safety within the unit. Therefore, a brief description of the potential signs and symptoms of methamphetamine withdrawal would allow clients to feel safe, and aid in their ability to focus their attention on their own path to recovery.

The withdrawal management used in this study utilized a two-tiered approach where clients first undergo physical withdrawal in observation rooms, followed by a transfer to programming where clients participate in psychoeducational groups and address psychological challenges and barriers to recovery. Methamphetamine withdrawal is well-suited to this approach. Physical symptoms and physical well-being are the focus of phase one, and this ensures the safety of the client when he/she is more symptomatic and exhibiting greater agitation (Government of South Australia SA Health, 2006). Specifically, staff and clients both identified that a calm environment, with clear and concise communication (World Health Organization, 2009) is most conducive to a positive intake assessment (Australian Government Department of Health and Ageing, 2008). Methamphetamine users recognized that their rapid thoughts, mood-

swings, and aggressive tendencies do not allow them to benefit from any psychological interventions during this time. Thus, staff supporting clients who are intoxicated or who are in the “tweaking phase” should provide redirection, limit lengthy questioning, and focus on creating a safe supportive environment (Australian Government Department of Health and Ageing, 2008). Consequently, psychological well-being should be the focus of phase two, which allows for the implementation of cognitive-behavioural approaches and motivational interviewing when methamphetamine users are more cognitively responsive. Cognitive-behavioural approaches and motivational interviewing have been suggested for methamphetamine withdrawal (Australian Government Department of Health and Ageing, 2008; Government of South Australia SA Health, 2008) and supportive treatment has been shown to prevent relapse (World Health Organization, 2009).

Finally, resource and team collaboration was identified as vital to the effective management of methamphetamine withdrawal. Teamwork allowed staff to combine their individual skill-sets to manage the withdrawal and despite previous research, staff demonstrated optimism in their ability to find solutions to any challenges that present (Pennay & Lee, 2009). In addition, staff felt it was important to seek assistance from crisis services, police services, and emergency services when the support required was outside their professional jurisdiction. The detoxification centre expressed accessing the crisis team when suicidal ideation and risk were present, and such knowledge about mental health services and their procedures for appropriate referral facilitate effective management (Australian Government Department of Health and Ageing, 2008). The use of emergency services has been identified in past research studies as an effective tool for managing severe methamphetamine-induced disorders (Toles et al., 2006). Specifically, researchers promote such treatment alliances between emergency medicine and

drug and alcohol clinicians (Government of South Australia SA Health, 2006), especially if withdrawal produces behaviours that places one's self or others at risk (Australian Government Department of Health and Ageing, 2008).

In sum, the five themes generated in this study should be considered when providing support to methamphetamine users in detoxification centres. However, the limitations of this study should be noted. Only one detoxification centre within London, Ontario was utilized. Specifically, this withdrawal management centre demonstrated an innovative response, where staff were well-versed in the stages of methamphetamine withdrawal and overall demonstrated confidence in their ability as a team to manage this withdrawal syndrome effectively. However, other detoxification centres may not share this confidence. Consequently, the agency's philosophy, values, and goals could have impacted their policies and practices. As such, strategies utilized within this facility may differ from other detoxification centres, and as a result, the generalizability of these results to other populations may be limited. Replication of these findings are therefore required. In addition, since the interviews were semi-structured, some participants may have been more open to expand on their thoughts and experiences, ultimately providing a greater contribution to the dataset. Ultimately, these staff and clients may have had more extreme views about methamphetamine withdrawal.

Furthermore, despite strict adherence to the process of thematic analysis, researcher bias cannot be completely eliminated. Only one researcher was involved in the production of codes, and the generation of subsequent themes. Therefore, the researcher's own experiences, beliefs, and interpretations may have influenced the results. Future research would benefit from the use of more researchers in the coding process to allow discussion of codes so a consensus could be reached, while minimizing the subjective biases of each researcher (Creswell et al., 2007).

Despite these limitations, this study significantly adds to the existing literature since only preliminary research has been conducted on the challenges and potential solutions for managing methamphetamine withdrawal (Pennay & Lee, 2011). The strategies revealed in this study were largely consistent with prior findings, and thus emphasize the value of staff and client experiences. Ultimately, staff and client accounts can aid in the development of innovative evidence-based practices when managing methamphetamine withdrawal. If these findings are further replicated, this information could be used to justify funding for detoxification centres to allow an expansion of their services by increasing staff, space, and education, while also working towards greater resource collaboration and the common usage of a two-tiered system. Such improvements has the potential to increase the number of substance-users who successfully enter treatment, while also encouraging more methamphetamine users to access professional support. The process of withdrawal is the first stage in the recovery process, and thus requires special attention. Thus, detoxification services are a crucial component in the continuum of care, and improvements will allow for a more informed response to this public health concern.

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Appendix

Question Pool for Clients (Interview)

1. Do you mind if I ask how old you are?
2. Do you have any previous experience with detoxification?
3. What is your drug of choice?
4. Are you aware of the methamphetamine crisis in London?
 - a. If so, how does this effect methamphetamine users, other drug users, and staff who provide service delivery and support?
5. Have you ever used methamphetamine/ been exposed to others who use methamphetamine?
 - a. How has this impacted you, and what have you learned about it?
6. How would you describe or imagine methamphetamine withdrawal? What are the symptoms?
7. How do you view methamphetamine withdrawal?
 - a. Is it unique?
8. Do you think methamphetamine requires any special considerations from staff and/or other clients?
9. How do you think methamphetamine withdrawal impacts other clients also undergoing detoxification?
10. Is there anything staff can do to make yourself and others feel safe?
11. If you could advise other clients and/or staff to help prepare them to support each other in the context of methamphetamine withdrawal what would you say?
12. Do you think detoxification services are prepared to handle methamphetamine withdrawal?
 - a. What are their current strengths and challenges?
13. Anything you would like to add?

Question Pool for Staff (Interview)

1. Do you mind if I ask how old you are?
2. How long have you been a staff member at WMC? Do you have any other addiction related experience?
3. Are you aware of the methamphetamine crisis in London?
 - a. If so, how does this effect methamphetamine users, other drug users, and staff who provide service delivery and support?
4. How would you describe or anticipate methamphetamine withdrawal to be like? What are the symptoms?
5. How do you think methamphetamine withdrawal impacts other clients also undergoing detoxification?
6. How do you view methamphetamine withdrawal?
 - a. Is it unique?
7. Do you think methamphetamine requires any special considerations from staff and/or other clients?

8. Can you think of any incidences where you felt unprepared to handle methamphetamine withdrawal, or any instances where you feel you or other staff handled the situation very well?
9. Is there any specific strategies or protocols you or your organization have developed to handle methamphetamine withdrawal appropriately?
10. If you could advise other clients and/or staff to help prepare them to support each other in the context of methamphetamine withdrawal what would you say?
11. Do you think detoxification services are prepared to handle methamphetamine withdrawal?
 - a. What are their current strengths and challenges?
12. What would you say are the most important things staff should remember when supporting individuals going through methamphetamine withdrawal?
13. Anything you would like to add?