



Addicted to the 'life of methamphetamine': Perceived barriers to sustained methamphetamine recovery

Adam C. Alexander¹, Christopher O. Obong'o¹, Prachi P. Chavan¹, Patrick J. Dillon², and Satish K. Kedia¹

¹School of Public Health, University of Memphis, Memphis, TN, USA and ²School of Communication Studies, Kent State University, North Canton, OH, USA

Abstract

Aims: This qualitative study explores and characterises barriers to methamphetamine recovery that emerge from users discussing anonymously their challenges in an online discussion forum. **Methods:** Anonymous letters and stories ($N = 202$), which were submitted to an online support forum for methamphetamine users and their loved ones, were analysed in Dedoose software using grounded theory methodology. **Findings:** Six perceived barriers emerged from the narratives, which were categorised as *internal* or *external*. The first three perceived barriers – low self-efficacy, conflicting thoughts about methamphetamine use, and side effects of withdrawal – were related to internal barriers, and the other three perceived barriers – escaping the drug environment, friends and family prevented recovery, and inadequate drug rehabilitation programmes – were related to external barriers. **Conclusions:** Methamphetamine users participating in an online discussion forum faced many internal and external barriers that impeded their recovery. These identified barriers were remarkably similar to barriers reported by users seeking treatment in conventional settings or recruited from drug networks, which suggests that methamphetamine users, in general, use multiple methods to assist with recovery and face many common barriers. Developing behavioural interventions that include online components may help remove some of the barriers and improve methamphetamine recovery.

Keywords

Methamphetamine abuse, perceived barriers, recovery, online narratives, qualitative method

History

Received 16 September 2016

Revised 5 January 2017

Accepted 11 January 2017

Published online 6 February 2017

Introduction

Methamphetamine is a potent stimulant that produces strong feelings of power, euphoria, and self-control (Petit, Karila, & Chalmin, 2012). In 2012, approximately 51 million people (ages 15–64) worldwide used methamphetamine at least once in the past 12 months, and the drug is the second most commonly used illicit drug after cannabis in North America, Asia, and Oceania (Degenhardt & Hall, 2012). Methamphetamine use increases the risk for numerous mental and physical health outcomes, including suicide and suicidal ideation, depression, anxiety, psychosis, sexually transmitted diseases, and cerebrovascular complications (Marshall & Werb, 2010; Petit et al., 2012). This addiction costs the global economy billions in health care services and treatment programmes (Degenhardt & Hall, 2012); equally important are the challenges that families experience when relatives suffer from methamphetamine abuse.

Unlike many other drugs, there are very few approved pharmacological treatments for methamphetamine (Petit et al., 2012), and although behavioural and psychological interventions are shown to be effective (Lee & Rawson, 2008), programmes modelled after these interventions often

have trouble enrolling and retaining participants, and even when participants are retained, there are high rates of relapse. For example, a study of 42 methamphetamine users receiving a 12-week relapse prevention programme from an outpatient clinic found that nearly 70% of participants had at least one positive urine screening for methamphetamine during the programme, and at least 41% quit the programme before completion (Chen, Chen, & Wang, 2015). Similar to short-term recovery, long-term recovery from methamphetamine is also difficult; Brecht and Herbeck (2014) found that 61% of users relapsed one year after receiving treatment from outpatient clinics while an additional 25% relapsed between two and five years later.

Low enrolment and high prevalence of relapse and dropout in methamphetamine treatment programmes suggest methamphetamine users face many barriers that impede recovery within and outside of treatment settings. German et al. (2006) conducted in-depth interviews with 48 current and recent methamphetamine users and found that participants often failed to abstain from methamphetamine because their friends offered them the drug, or they needed methamphetamine to help with stress relief or weight loss. Similarly, Boeri, Harbry, and Gibson (2009) performed in-depth interviews with 48 former and current methamphetamine users and found that during recovery, psychological and social trauma, such as losing a child or discovering infidelity of one's spouse, were primarily responsible for relapse. Methamphetamine was used

to avoid the negative emotions and thoughts associated with these events. Lastly, Herbeck, Brecht, Christou, and Lovinger, (2014) explored barriers to methamphetamine recovery among a small group of methamphetamine users receiving and not receiving treatment. Similar to the findings of Boeri et al. (2009), in both groups, loss of social relationships and personal trauma were important barriers to recovery, however participants who received no treatment were more likely to report the desire to have fun as a barrier to recovery (82% vs. 44%), and the treatment group were more likely to report craving and addiction as a barrier to recovery (78% vs. 36%).

The literature suggests that barriers to sustained methamphetamine recovery are related to social and personal factors, such as peer pressure and psychological trauma. These studies have used primarily samples recruited from treatment settings or from drug networks; no studies – to our knowledge – have used anonymous narratives retrieved from online forums to understand barriers to sustained recovery from methamphetamine. Data from online sources may offer new insights about common barriers to sustained recovery from methamphetamine because the Internet enables users, through anonymity, to resist dominant narratives about drug use and recovery, and allows alternative discourses to emerge that may be missed using conventional study populations (Barratt, Allen, & Lenton, 2014; Soussan & Kjellgren, 2014). Thus, the present study qualitatively examines barriers to sustained methamphetamine recovery among users participating in an online forum. The goal of this paper is to explore and characterise perceived barriers that emerge from users anonymously discussing their challenges in recovering from methamphetamine.

Methods

Qualitative approaches to data analysis help navigate the complexities of drug use (Nichter, Quintero, Nichter, Mock, & Shakib, 2004), and have been applied extensively to understand the trajectory, which includes cessation, lapse, and relapse of methamphetamine use (Boeri et al., 2009; German et al., 2006; Sexton, Carlson, Leukefeld, & Booth, 2008). This study applied qualitative analytical techniques to the letters and stories extracted from *KCI The Anti-Meth Site* (http://www.kci.org/meth_info/meth_letters.htm) – a website that encourages methamphetamine users (and their loved ones) to submit letters and stories about methamphetamine use and the challenges associated with initiating and maintaining drug abstinence. Although the COREQ (Tong, Sainsbury, & Craig, 2007) was developed for qualitative studies that conducted focus groups or in-depth interviews; this study, where applicable, reported critical information listed in this checklist.

Study data

The site administrator uploaded letters and stories on a monthly basis, and this study included letters and stories extracted from January 2009 to December 2013, which yielded 202 letters and stories for analysis. No informed consent was obtained to access this information because these letters and stories are open to all site visitors, and are intended for educational purposes (Eysenbach & Till, 2001; Flicker,

Haans, & Skinner, 2004). In addition, the Institutional Review Board at the authors' home institution approved the study protocol.

Data analysis

All letters and stories in the study sample were reformatted into transcripts and uploaded into Dedoose, a web-based software programme designed for analysing qualitative and mixed methods data (Dedoose 5.0.11, SocioCultural Research Consultants, LLC, Los Angeles, CA, USA). The grounded theory approach (Charmaz, 2003; Strauss & Corbin, 1984) was chosen to analyse the qualitative data because the emergent themes needed to be congruent with experiences expressed by the users in the narratives, and would benefit from being grouped into a unified structure to help explain the multitude of experiences contained within the narratives (Starks & Brown Trinidad, 2007). To ensure rigour, the first three co-authors, who are from diverse backgrounds, independently read the entire transcript, and reached consensus on emerging themes which resulted in six themes. Finally, one co-author coded the entire transcript in Dedoose for further analysis.

Coding was focussed on narratives depicting barriers to sustained recovery from methamphetamine. Coding reports for each theme was produced and reviewed by three co-authors. Upon careful review of the coding reports, the researchers determined that the emergent themes broadly aligned with tenants from the Health Belief Model (HBM; Janz & Becker, 1984), specifically *perceived barriers*. Briefly, perceived barriers refer to an individual's perception of the obstacles that discourage or prevent them from engaging in healthy behaviours (Janz & Becker, 1984). These perceived barriers were collapsed into two categories: *internal* and *external* barriers (as shown in Table 1). For the purposes of this study, internal barriers included an individual's beliefs, values, and perception that impeded recovery, while external barriers comprised of characteristics of the environment that prevented recovery. The co-authors agreed that three themes each were related to internal and external barriers.

Results

Six barriers emerged from the narratives, which were broadly categorised as *internal* or *external* barriers. The first three barriers – low self-efficacy, conflicting thoughts about methamphetamine use, and side effects of withdrawal – were related to internal barriers, and the other three barriers – escaping the drug environment, friends and family prevented recovery, and inadequate drug rehabilitation programmes – were related to external barriers (see Table 1 for additional details).

Perceived internal barriers

Low self-efficacy

Most users felt powerless and resigned themselves to a lifetime of methamphetamine use; quit attempts were viewed as temporary or futile. Some users also relapsed because “everyone around” them who tried to recover from methamphetamine failed. Numerous unsuccessful quit attempts by

Table 1. Perceived internal and external barriers that impede sustained methamphetamine recovery.

Theme	Description of theme	Representative quote from narratives
Perceived internal barriers		
1. Low self-efficacy	The narratives described methamphetamine was too addictive to recover from, and it was the worse form of addiction compared to other drugs. These feelings discourage sustained recovery.	“[methamphetamine] is the only thing that makes me feel alive, without it I’m nothing but a hollow shell of a dark depressed person who has thoughts of suicide racing through her mind every time she blinks”.
2. Conflicting thoughts about methamphetamine use	The narratives described users being torn between their desire to completely recover from methamphetamine and their perceived control over the drug. Many users cited this false sense of control as their reason for perpetual relapse.	“The hardest part is that (and this is true for most of my friends) you are fully aware of the damage you are causing on some sublime level and yet the engine that drives your physical action to the contrary is stuck in the mud and being buried deeper by the day”.
3. Side effects of withdrawal	Relapse and continued use was considered more favourably compared to the pain and anguish of side effects associated with recovery.	“After 3 months of being sober, my panic attacks came back, twice as worse. . .I went to the doctor and was prescribed on a pill. The pill didn’t work, so I tried smoking pot again”.
Perceived external barriers		
1. Escaping the drug environment	Users found it difficult to find areas and activities outside of the drug environment and dissociate with familiar users.	“I have been clean for a little over a month and staying away from these people has been soooo hard. Especially when I get bored or someone comes over to the house. . .not only did I have to break up with ‘crystal’– I had to break up with all those ‘friends’ who welcomed her into their life”.
2. Friends and family prevented recovery	Although some users relapsed due to perceived social support for continued use, other users lacked the social support they needed to sustain recovery.	“I could probably quit successfully if I entered a rehab programme but I can’t go away for any amount of time for multiple reason, my job, and watching my kids while my wife works. Plus she would not be optimistically supportive of me, she’d basically belittle me and treat me badly”.
3. Inadequate drug rehabilitation programmes	The stringent enrolment criteria, arduous schedules, and the burden on user’s social roles made sustained engagement in rehabilitation challenging.	“In the end I went to the hospital with him and my step-mom. He wasn’t admitted. They turned him away because he wasn’t ‘at risk’. It still baffles me to hear that someone who is addicted to methamphetamine isn’t ‘at risk’”.

themselves or their peers discouraged the possibility of recovery:

I have flushed my drugs down the toilette countless times, and been weeks and months without it. I asked someone to help me go to a NA meeting and got numbers for a support group. I have left town, and the state I live in. I don’t talk to certain people and I have changed my number. I am still using drugs, sadly to say.

Most narratives described methamphetamine as being “evil”, “devil”, “Satan”, and too addictive to completely quit. Users also believed that methamphetamine addiction was the worst drug addiction. For example, one user suggested that methamphetamine was more addictive than cocaine:

This [methamphetamine] drug makes you not give a sh*t about anything else. I stopped using cocaine four years ago just because I wanted to. Crank, meth, ice or whatever you want to call it doesn’t work that way. You can’t quit just because you want to.

Conflicting thoughts about methamphetamine use

Many users described competing, and often, contradictory thoughts about their methamphetamine use; users’ desired to sustain recovery, but simultaneously, also desired to continue

using methamphetamine. One user’s brief narrative captured this sentiment: “I cry out for help but seek or want none. This is Meth. I love and hate simultaneously. This is Meth. . .”. This desire to continue using methamphetamine overpowered users’ commitment to recovery. Other users’ narratives described feeling conflicted about their control over methamphetamine. During recovery, some users decided to “use [methamphetamine] just once” because of a false sense of control. For example, one user, who was drug free for over a year, relapsed because she thought using methamphetamine one more time would be fine:

. . .I thought that I was doing well, I was drug free for a year and 3 months. Out of the blue my boyfriend was acting strange. We had lived together for about a year now and I knew he didn’t act the way he used to. . . to calm my nerves, I thought just once won’t hurt, not remembering last time I said it to. Once turned into a big addiction.

In a related narrative, a close relative mentioned that the user failed to recover because they were unable to admit their addiction to methamphetamine:

. . .he [said he] could stop any time he wanted. Well our family wouldn’t hear of it and got him into detox and eventually rehab. . . we pressured my brother to go which we now know was a mistake. . .my brother got out of rehab and he went full force into meth!!!!

Side effects of withdrawal

Many users described relapsing because of the negative side effects of methamphetamine withdrawal. A long list of side effects emerged from these narratives, including itching skin, panic attacks, nausea, insomnia, migraine, shivers, intense craving, trouble breathing, mood swings, emotional pain, anger, anxiety, guilt, and boredom, but the most frequently mentioned side effects were weight gain and hallucinations. Some side effects – especially weight gain – were the reason many users tried and became addicted to methamphetamine. A few narratives even mentioned that relapse was more bearable than the side effects of methamphetamine withdrawal:

I checked myself into rehab in 2000 and have relapsed several times...since I have been off it I have gained A LOT of weight, which is a big trigger to return to it...I find myself wanting to even though I know the consequences. How insane is that?

Perceived external barriers*The life of methamphetamine*

Narratives described users becoming addicted to a “life of methamphetamine”. Besides the drug itself, the “life of methamphetamine” included the connections users made with other users and the fondness for activities and locations that involved drug use:

I am now trying to recover and it is the hardest thing I’ve ever done. I was addicted to the life that comes with using, just as much as I was addicted to the drug...walking away from the life was difficult, and it is a struggle every day.

Other users’ narratives revealed that most of their close friends and family used methamphetamine. For them, quitting methamphetamine meant leaving their loved ones behind and starting a new life:

...I still have my drug addiction. I have tried (sp) to get off the stuff. You almost have to move to the other side of the world where you don’t have any connections.

For many users, leaving the drug environment seemed insurmountable. For others, after successfully escaping the drug environment, a chance encounter with an unknown user was sufficient to trigger a relapse. The three narratives below illustrated these challenges:

[my] 4th day sober I am scared and alone, saddened that if I really want to quit I will not be able to hang out with my lifelong friends...seeing any of them brings memories of tweaked out nights when we were all connected souls from another world. Now my only thoughts are pain and sadness."

“It’s not easy to give up those ‘friends,’ those tweaked experiences, or the feeling of being completely invincible”.

“If you manage to get a couple weeks of clean time and start feeling better all it takes is to smell it on someone’s breath in public and you are triggered.

Friends and family prevented recovery

Many narratives described users being encouraged by their friends and family to continue methamphetamine use. These users received financial, instrumental, and emotional support for their addiction, and these resources protected them from the negative consequences of methamphetamine use:

Many [addicts] will never...hit bottom because their loved ones won’t let them...just tell them you love them but you refuse to enable them and you will be there for them when they want help, but until then – you can’t help them. Just let them know you love them.

Sometimes relapse was triggered by the emotional connections users had with close friends and family, such as a romantic relationship:

I came home to my mom’s and managed stayed clean for another four days before he [boyfriend] called me. He told me how much he missed me and he immediately came and got me and we started the routine all over.

Conversely, some narratives mentioned that users relapsed because they felt isolated, and their friends and family refused to provide emotional and financial support during the recovery process. Another narrative described vividly the apparent lack of concern of one user’s mother:

My mom found out I did it and just told me not to steal for the drug. She said she didn’t mind me doing drugs as long as I don’t steal for them"

Inadequate drug rehabilitation programmes

Many narratives emphasised that drug rehabilitation and treatment programmes were burdensome and discouraged recovery. The enrolment criteria to enlist in treatment were described as “unrealistic”; for example, many users noted that they were turned away because they were not “at-risk enough”:

A recovery center in my area actually turned me away saying that three months of use hardly makes me a candidate for intensive out-patient rehab...

Others were turned away because of limited space available to enrol new clients.

Some narratives mentioned that the cost of treatment was also a barrier to recovery. Some described the sacrifices required to complete treatment; the most challenging sacrifices involved family obligations and work schedule:

They schedule meetings only at 7 p.m. in the mountain valley where I live...they also demand that people be at

meetings or counseling (sp) in mornings and afternoons of 3 days a week plus they must show proof of attending AA meetings somewhere 3 times a week. How can an addict change their life when they cannot be allowed a job to give them purpose or at least so they can afford transportation to all of the meetings?

Beyond challenges associated with enrolling in and paying for treatment programmes, methamphetamine users' narratives also questioned treatment programmes' effectiveness. One user, for example, wrote:

Rehabs in this area are full and they must want help before accepted. They are short term and the users are back in business within days. Not one person that has either went to rehab or prison has been reformed. They come back and within days are back into the same lifestyle as before.

Discussion

This qualitative study examined the narratives of methamphetamine users participating in an online discussion forum, and found that users experienced significant perceived internal and external barriers to sustained recovery, including low self-efficacy, conflicting thoughts about methamphetamine use, and side effects of withdrawal, escaping the drug environment, negative support received from family and friends, and difficulty with treatment programmes. According to HBM (Janz & Becker, 1984), these perceived internal and external barriers, if not addressed, will discourage and prevent sustained recovery.

Low self-efficacy among methamphetamine users has been found in previous research about recovery barriers (German et al., 2006), and in this study, was described as feeling "powerless", and relapse during recovery was considered "inevitable". These thoughts of "powerlessness" and "inevitability" do not encourage abstinence or successful recovery. Conversely, our findings also suggest that some methamphetamine users may be experiencing cognitive dissonance about their drug use – competing thoughts of being addicted to and controlling their methamphetamine use. A phenomenon commonly seen in heavy tobacco smokers – where smokers avoid and ignore information, and change their beliefs to align with their smoking behaviour (Jane, Orcullo, & Hui San, 2016), our findings suggest that cognitive dissonance is also present among methamphetamine users, and these conflicting thoughts may encourage relapse because users falsely believe they can control their methamphetamine use.

The narratives described methamphetamine withdrawal as a particularly vulnerable period for relapse. Methamphetamine withdrawal has two phases; an acute phase that occurs during the first week, and a subacute phase that lasts for at least two more weeks (McGregor et al., 2005; Zorick et al., 2010). Both phases are characterised by increased sleeping and appetite. Depression-related symptoms including inactivity, fatigue, anhedonia, and dysphoria are present during the first week, but weaken by the end of the acute phase. At the start of the subacute phase, less severe symptoms of withdrawal, such as anxiety and cravings,

emerge and can last up to five weeks (McGregor et al., 2005; Zorick et al., 2010). Although the narratives did not describe an increased appetite as a withdrawal symptom, numerous users described weight gain as a significant barrier to recovery. An increased appetite may lead to weight gain, which although not documented for methamphetamine use, is a common barrier to recovery for cigarette smokers (Aubin, Farley, Lycett, Lahmek, & Aveyard, 2012; Spring et al., 2009). In addition, anxiety is also a significant barrier to recovery, and research has shown that short-term abstinence does not improve anxiety for methamphetamine users (Bagheri, Mokri, Khosravi, & Kabir, 2015). Addressing post-cessation weight gain and anxiety may decrease the risk of relapse for methamphetamine users during recovery.

Many methamphetamine users described the drug environment and negative social support from family and peers as barriers to sustained recovery. An environment where drugs are highly prevalent and easily accessible, and moving away from this environment has been a problem commonly cited by many methamphetamine users (Boeri et al., 2009; German et al., 2006; Sexton et al., 2008). Embedded within the drug environment are social networks that extend to family members, peers, and co-workers. These "social drug-networks" influence the entire drug trajectory of methamphetamine use; many users start and continue to use methamphetamine because people within their networks encourage them to do so (Boshears, Boeri, & Harbry, 2011). Methamphetamine users who seek to maintain recovery have to remove themselves from the drug environment and sever their connection with drug networks. For example, a qualitative longitudinal study of 24 methamphetamine users living in rural Arkansas and Kentucky, found that the users who successfully recovered from methamphetamine use ($N=13$) isolated themselves from their friends and family, and kept themselves busy with other activities, such as work and school (Sexton et al., 2008). Our findings also revealed that users on the path to recovery isolated themselves from the drug environment, yet often certain encounters in the new environment, such as smelling the odour of methamphetamine on a stranger, were still strong enough triggers for returning to methamphetamine use. This suggests that those who isolate themselves from the drug environment are still at high risk for relapse, and need additional support to sustain recovery.

Receiving treatment for methamphetamine abuse helps sustain recovery, but many users described dropping out of treatment because they were unable to balance their work and family duties with the expectations of their treatment programme. Furthermore, some methamphetamine users were turned away from treatment because the centre lacked space or determined that the user did not meet the criteria for their programme. Other researchers have found similar findings (Kenny, Harney, Lee, & Pennay, 2011; MacMaster, 2013; Pennay & Lee, 2009), and have called for treatment programmes to make small changes, such as changing opening times, to accommodate the needs of methamphetamine users. However, a recent systematic review indicates that these practical barriers to treatment access are less common than our findings suggest, and psychosocial barriers to accessing treatment, such as stigma and belief in self-recovery, are more problematic and prevalent among

methamphetamine users (Cumming, Troeung, Young, Kelty, & Preen, 2016). Nonetheless, at least from these narratives, methamphetamine users seemed to lack confidence in the general effectiveness of treatment, which echoes concerns voiced by some methamphetamine users in another study (Meade et al., 2015). These negative perceptions of treatment may be influenced by their own self-efficacy; users with low self-efficacy may be unable to meet demands required by treatment programmes, and therefore, view treatment programmes negatively.

Online environments enable drug users to congregate and form communities that offer support and information to help other struggling users navigate the complexities of their addiction (Coulson, 2014; Donath, 2007). Researchers who utilise online resources may discover new information about behaviours around methamphetamine use because these communities are based on the users' perspectives and their experiences with the drug. Going forward, researchers should address whether online forums can offer effective treatment for methamphetamine users and if conventional treatment settings can be enhanced by the online environment. Answering these questions may help address longstanding problems with behavioural and psychological interventions for methamphetamine use (Brecht & Herbeck, 2014; Chen et al., 2015).

Limitations of the study should be noted. First, there was sparse demographic information about the members of this online support forum, and the actual number of users participating in this group was unknown. However, limited information from Alexa (<http://www.alexa.com/>), reported that most of the site visitors lived in the United States or Australia (73.2% and 12.7%, respectively), which are both countries where methamphetamine is commonly used (Degenhardt & Hall, 2012). Therefore, the perceived internal and external barriers to sustained recovery that emerged from our study may be specific to users residing in Western countries only. Second, we were unable to verify whether these narratives provided honest accounts of users' experiences with methamphetamine. Nonetheless, the perceived barriers that emerged from these narratives were consistent with previous literature, which indicated that these narratives had some degree of veracity. Lastly, these narratives are representative of the thoughts and experiences of methamphetamine users visiting *KCI The Anti-Meth Site*, and may not be generalisable to other methamphetamine support websites. However, given that the emergent perceived barriers in this study closely matched the barriers reported in studies that used non-online study populations (Boeri et al., 2009; German et al., 2006; Herbeck et al., 2014; Sexton et al., 2008), other online sources may yield similar information about barriers to methamphetamine recovery.

In conclusion, the pathway to sustained recovery is very difficult for many methamphetamine users. This qualitative study found that methamphetamine users experienced many perceived internal and external barriers that impeded recovery. These perceived barriers were similar to barriers reported by users seeking treatment in conventional settings or recruited from drug networks, which suggests these populations overlap with each other. Future research should attempt to integrate the online environment and traditional treatment

settings to improve recovery among methamphetamine users. Building integrated virtual and non-virtual interventions for methamphetamine recovery may reduce these external and internal barriers, which would make it easier for users to sustain recovery.

Declaration of interest

The authors declare no conflict of interest.

Part of the funding for the data analysis came from the Center for Substance Abuse Treatment/Substance Abuse and Mental Health Services Administration (CSAT/SAMHSA) through the Division of Alcohol and Drug Abuse Services of the Tennessee Department of Mental Health.

References

- Aubin, H.J., Farley, A., Lycett, D., Lahmek, P., & Aveyard, P. (2012). Weight gain in smokers after quitting cigarettes: Meta-analysis. *BMJ*, *345*, e4439. <https://doi.org/10.1136/bmj.e4439>.
- Bagheri, M., Mokri, A., Khosravi, A., & Kabir, K. (2015). Effect of abstinence on depression, anxiety, and quality of life in chronic methamphetamine users in a therapeutic community. *International Journal of High Risk Behaviors and Addiction*, *4*, e23903. <http://doi.org/10.5812/ijhrba.23903>.
- Barratt, M.J., Allen, M., & Lenton, S. (2014). PMA sounds fun: Negotiating drug discourses online. *Substance Use & Misuse*, *49*, 987–998. <http://doi.org/10.3109/10826084.2013.852584>.
- Boeri, M.W., Harbry, L., & Gibson, D. (2009). A qualitative exploration of trajectories among suburban users of methamphetamine. *Journal of Ethnographic and Qualitative Research*, *3*, 139–151. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/21552386>.
- Boshears, P., Boeri, M., & Harbry, L. (2011). Addiction and sociality: Perspectives from methamphetamine users in suburban USA. *Addict Res Theory*, *19*, 289–301. <http://doi.org/10.3109/16066359.2011.566654>.
- Brecht, M.L., & Herbeck, D. (2014). Time to relapse following treatment for methamphetamine use: A long-term perspective on patterns and predictors. *Drug and Alcohol Dependence*, *139*, 18–25. <http://doi.org/10.1016/j.drugalcdep.2014.02.702>.
- Charmaz, K. (2003). Grounded theory. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 81–110). London: Sage.
- Chen, Y.C., Chen, C.K., & Wang, L.J. (2015). Predictors of relapse and dropout during a 12-week relapse prevention program for methamphetamine users. *Journal of Psychoactive Drugs*, *47*, 317–324. <http://doi.org/10.1080/02791072.2015.1071447>.
- Coulson, N.S. (2014). Sharing, supporting and sobriety: A qualitative analysis of messages posted to alcohol-related online discussion forums in the United Kingdom. *Journal of Substance Use*, *19*, 176–180. <http://doi.org/10.3109/14659891.2013.765516>.
- Cumming, C., Troeung, L., Young, J.T., Kelty, E., & Preen, D.B. (2016). Barriers to accessing methamphetamine treatment: A systematic review and meta-analysis. *Drug and Alcohol Dependence*, *168*, 263–273. <http://doi.org/10.1016/j.drugalcdep.2016.10.001>.
- Degenhardt, L., & Hall, W. (2012). Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *The Lancet*, *379*, 55–70. [http://doi.org/10.1016/S0140-6736\(11\)61138-0](http://doi.org/10.1016/S0140-6736(11)61138-0).
- Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication*, *13*, 231–251. <http://doi.org/10.1111/j.1083-6101.2007.00394.x>.
- Eysenbach, G., & Till, J.E. (2001). Ethical issues in qualitative research on internet communities. *BMJ*, *323*, 1103–1105. <http://doi.org/bmj.e4439/bmj.323.7321.1103>.
- Flicker, S., Haans, D., & Skinner, H. (2004). Ethical dilemmas in research on internet communities. *Qualitative Health Research*, *14*, 124–134. <http://doi.org/10.1177/1049732303259842>.
- German, D., Sherman, S.G., Sirojrojn, B., Thomson, N., Aramrattana, A., & Celentano, D.D. (2006). Motivations for methamphetamine cessation among young people in Northern Thailand. *Addiction*, *101*, 1143–1152. <http://doi.org/10.1111/j.1360-0443.2006.01490.x>.

- Herbeck, D.M., Brecht, M.L., Christou, D., & Lovinger, K. (2014). A Qualitative Study of Methamphetamine users' perspectives on barriers and facilitators of drug abstinence. *Journal of Psychoactive Drugs, 46*, 215–225. <http://doi.org/10.1080/02791072.2014.914611>.
- Jane, D., Orcullo, C., & Hui San, T. (2016). Understanding cognitive dissonance in smoking behaviour: A qualitative study. *International Journal of Social Science and Humanity, 6*, 481–484. <http://doi.org/10.7763/IJSSH.2016.V6.695>.
- Janz, N.K., & Becker, M.H. (1984). The Health Belief Model: A decade later. *Health Education Quarterly, 11*, 1–47. Retrieved from: <http://doi.org/10.1177/109019818401100101>.
- Kenny, P., Harney, A., Lee, N.K., & Pennay, A. (2011). Treatment utilization and barriers to treatment: Results of a survey of dependent methamphetamine users. *Substance Abuse Treatment, Prevention, and Policy, 6*, 3. <http://doi.org/10.1186/1747-597X-6-3>.
- Lee, N., & Rawson, R. (2008). A systematic review of cognitive and behavioural therapies for methamphetamine dependence. *Drug and Alcohol Review, 27*, 309–317. <http://doi.org/10.1080/09595230801919494>.
- MacMaster, S.A. (2013). Perceptions of need, service use, and barriers to service access among female methamphetamine users in Rural Appalachia. *Social Work in Public Health, 28*, 109–118. <http://doi.org/10.1080/19371918.2011.560820>.
- Marshall, B.D.L., & Werb, D. (2010). Health outcomes associated with methamphetamine use among young people: A systematic review. *Addiction, 105*, 991–1002. <http://doi.org/10.1111/j.1360-0443.2010.02932.x>.
- McGregor, C., Srisurapanont, M., Jittiwutikarn, J., Laobhripatr, S., Wongtan, T., & White, J.M. (2005). The nature, time course and severity of methamphetamine withdrawal. *Addiction, 100*, 1320–1329. <http://doi.org/10.1111/j.1360-0443.2005.01160.x>.
- Meade, C.S., Towe, S.L., Watt, M.H., Lion, R.R., Myers, B., Skinner, D., ... Pieterse, D. (2015). Addiction and treatment experiences among active methamphetamine users recruited from a township community in Cape Town, South Africa: A mixed-methods study. *Drug and Alcohol Dependence, 152*, 79–86. <http://doi.org/10.1016/j.drugalcdep.2015.04.016>.
- Nichter, M., Quintero, G., Nichter, M., Mock, J., & Shakib, S. (2004). Qualitative research: contributions to the study of drug use, drug abuse, and drug use(r)-related interventions. *Substance Use & Misuse, 39*, 1907–1969. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/15587954>.
- Pennay, A.E., & Lee, N.K. (2009). Barriers to methamphetamine withdrawal treatment in Australia: Findings from a survey of AOD service providers. *Drug and Alcohol Review, 28*, 636–640. <http://doi.org/10.1111/j.1465-3362.2009.00074.x>.
- Petit, A., Karila, L., & Chalmers, F. (2012). Methamphetamine addiction: A review of the literature. *Journal of Addiction Research & Therapy, 1*(S1), 006. <http://doi.org/10.4172/2155-6105.S1-006>.
- Sexton, R., Carlson, R., Leukefeld, C., & Booth, B. (2008). Trajectories of methamphetamine use in the rural south: A longitudinal qualitative study. *Human Organization, 67*, 181–193. <http://doi.org/10.17730/humo.67.2.h457132482255391>.
- Soussan, C., & Kjellgren, A. (2014). Harm reduction and knowledge exchange—a qualitative analysis of drug-related Internet discussion forums – . *Harm Reduction Journal, 11*, 25. <http://doi.org/10.1186/1477-7517-11-25>.
- Spring, B., Howe, D., Berendsen, M., McFadden, H.G., Hitchcock, K., Rademaker, A.W., & Hitsman, B. (2009). Behavioral intervention to promote smoking cessation and prevent weight gain: A systematic review and meta-analysis. *Addiction, 104*, 1472–1486. <http://doi.org/10.1111/j.1360-0443.2009.02610.x>.
- Starks, H., & Brown Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research, 17*, 1372–1380. <http://doi.org/10.1177/1049732307307031>.
- Strauss, A., & Corbin, J. (1994). Grounded theory methodology: An overview. In Denzin, N.K., & Lincoln, Y.S. (Eds.), *Handbook of qualitative research* (pp. 273–285). Thousand Oaks, CA: Sage.
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care, 19*, 349–357. <http://doi.org/10.1093/intqhc/mzm042>.
- Zorick, T., Nestor, L., Miotto, K., Sugar, C., Hellemann, G., Scanlon, G., ... London, E.D. (2010). Withdrawal symptoms in abstinent methamphetamine-dependent subjects. *Addiction, 105*, 1809–1818. <http://doi.org/10.1111/j.1360-0443.2010.03066.x>.