



SOCIDROGALCOHOL
Sociedad Científica Española
de Estudios sobre el Alcohol,
el Alcoholismo y las otras Toxicomanías

ADICCIONES

2025 ■ VOL. 37 ■ N. 2 ■ PAGES 113-124

www.adicciones.es

ADICCIONES



ORIGINAL

“I’m not an addict”: A thematic analysis of addiction experiences among Chinese female methamphetamine users

«No soy una adicta»: Un análisis temático de las experiencias de adicción entre mujeres chinas consumidoras de metanfetaminas

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Abstract

Methamphetamine (meth) use has become a serious health epidemic in China, and the number of female meth users has risen substantially in the previous decade. However, until recently, patterns of meth addiction among Chinese women were rarely studied. To fill the void, this study implemented a thematic analysis approach to investigate Chinese female meth users' addiction experiences based on 49 semi-structured interview transcripts. The findings reveal that Chinese female meth users generally believe that meth is not physically addictive, but can cause their psychological dependence. Meth use leads to users' psychological enjoyment, and in addition to this, it has other functions. For example, some people use meth as a necessity to relieve stress, keep fit, alleviate pain, cure diseases, and deal with alcoholism. The findings also demonstrate that meth use is indispensable in particular social networks based on participants' socioeconomic backgrounds, especially those from low socioeconomic backgrounds. By understanding their experiences on meth addiction, both formal educational programs and social media exposure are suggested to provide female meth users, especially those situated in high-risk social networks, with adequate and up-to-date meth knowledge. Educational programs are also needed during treatment. Targeted interventions and social support programs are further recommended to help female meth users avoid severe health issues due to meth consumption.

Keywords: methamphetamine, addiction experiences, Chinese female drug users, thematic analysis.

Resumen

El consumo de metanfetaminas (meta) se ha convertido en una epidemia grave de salud en China, y el número de consumidoras de meta ha aumentado de manera importante en la última década. Sin embargo, rara vez se había estudiado los patrones de adicción a la meta entre mujeres chinas hasta hace poco. Para llenar el vacío, este estudio realizó un análisis temático para investigar las experiencias de adicción de mujeres chinas consumidoras de meta, en base a las transcripciones de 49 entrevistas semi-estructuradas. Estos hallazgos revelan que las chinas consumidoras de meta piensan, en general, que la meta no es físicamente adictiva— a pesar de que pueda provocarles dependencia psicológica. El consumo de meta les genera un disfrute psicológico, además de cumplir otras funciones. Por ejemplo, algunas personas la necesitan para aliviar el estrés, mantenerse en forma, disminuir el dolor, curar enfermedades y afrontar el alcoholismo. Los hallazgos también muestran que el consumo de meta es indispensable en algunas clases sociales específicas, según el nivel socioeconómico de las consumidoras, en particular entre aquellas de niveles socioeconómicos bajos. Mediante la comprensión de sus experiencias en torno a la adicción a la meta, se recomiendan programas educativos formales como la exposición a redes sociales para aportar a las mujeres consumidoras de meta —en particular las de clases sociales de alto riesgo— conocimientos actualizados y adecuados sobre la sustancia. Los tratamientos también requieren programas educativos. Es más, se recomiendan intervenciones dirigidas y programas de apoyo social para ayudar a las consumidoras de meta a evitar problemas graves de salud debido a su consumo.

Palabras clave: metanfetaminas, experiencias de adicción, consumidoras chinas de sustancias, análisis temático.

■ Received: January 2020; Accepted: March 2020.

■ ISSN: 0214-4840 / E-ISSN: 2604-6334

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Methamphetamine (meth) is the second most widely used illicit drug after cannabis in the world (Baracz & Cornish, 2016; Potvin et al., 2018). The popularity of meth use is now leading to a severe worldwide health problem that has already reached the epidemic level (Degenhardt et al., 2017; Petit et al., 2012). From a pharmacological perspective, meth is a highly addictive drug (Baracz & Cornish, 2016; Meade et al., 2015; Yuan et al., 2014). Meth can cause extensive neural damage that leads to individuals' uncontrollable and compulsive use (Barr et al., 2006; Rose & Grant, 2008). Prolonged use of meth sometimes creates tolerance for the drug, which usually increases the doses and frequencies of use (Rawson & Condon, 2007). Meanwhile, discontinuation of meth use often results in a withdrawal syndrome, including dysphoric mood, depression, anxiety, fatigue, insomnia, and increased appetite (Elkashef et al., 2008; Petit et al., 2012; Zorick et al., 2010).

"Addiction" is a concept that involves much debate (Sussman & Sussman, 2011) regarding its richer meanings of not only drug users' personality characteristics but also socio-cultural contexts (Akers, 1991; Decorte, 2001). For example, the self-medication hypothesis (Khantzian, 2003) states that drug addiction functions as a means of self-soothing from the distressful psychological states and helping drug users achieve emotional stability (Pascari, 2016). Moreover, according to the "addiction-as-substitute-object model", pleasurable activities are defined as "addictive" only if they become compulsive behaviors (Johnson, 1999). Similarly, the neoliberal ideology of autonomy and freedom also sees "addiction" as "depriving a person of free will and the capacity for autonomous choice" (Pennay & Moore, 2010, p. 563). Overall, the personal control of drug use is fundamentally discussed (Decorte, 2001) in verifying whether a specific drug use is excessive based on the idea that "controlled consumption is appropriate consumption" (Riley et al., 2010, p. 448). When considering the social context, illicit drug use is traditionally seen as a problematic behavior that is related to subcultures (Hathaway et al., 2011; Sandberg, 2013). Therefore, "drug addiction" in certain social contexts might be used as either a stigmatizing label to criticize people who have drug use habits, or a self-applied label as an excuse for failing to achieve abstinence (Akers, 1991).

Regarding gender differences, men and women reported different experiences in their use and responses to meth (Dluzen & Liu, 2008). Compared to their male counterparts, motivations for women to use meth are concentrated on their external concerns and obligations: enhancing self-confidence, increasing productivity, easing life stress, coping with bad mood, and getting more energy to be a better mother and wife (Bairan et al., 2014; Boeri, 2013; Dluzen & Liu, 2008; Semple et

al., 2005). On the other hand, self-medication as well as weight control also bring a higher likelihood to use meth among women (Brecht et al., 2004; Semple et al., 2005). Differing from men who may easily purchase drugs from various sources, women tend to access meth from their close social network and male partners - even trading with sex had been observed as a pattern (Loza et al., 2016; Semple et al., 2007; Venios & Kelly, 2010). Last but not least, research also found that women would usually face more serious adverse health consequences after meth use, when compared to men (Shen et al., 2012).

As encompassed with multileveled meanings, "addiction" should be understood from not only the pharmacological angle but also the drug user's personal experiences and social settings (Decorte, 2001; Zinberg, 1984). However, women-oriented perspective in the substance use area is generally considered as unconventional (Ettorre, 1989). Since prior research has already found the significant gender differences of meth use between genders, it is valuable to conduct a study which focuses on female drug users' self-understanding on their "meth addiction."

Meth Use and Meth Users' Treatment in China

Recent data shows that East and South-East Asia have gradually replaced North America as the center of meth production, marketing, and consumption (He et al., 2013; McKetin et al., 2008; United Nations Office on Drugs and Crime, 2017). China is one of the most important producers and marketers of meth in the region (Liu et al., 2018), and meth is now also the most prevalent illicit drug in China (National Narcotics Control Commission of China, 2019).

Though the majority of Chinese drug users are men (Jia et al., 2015; Liu & Liu, 2011), there is evidence showing that the female group has risen substantially in the previous decade. Moreover, these women generally start their "drug career" at younger ages, while most of them are found to be meth users (Liu et al., 2016; Liu & Liu, 2011). China's broadening illicit drug market further aggravates its domestic situation regarding meth control, reflecting the rapidly increasing number of female meth users (United Nations Office on Drugs and Crime, 2016).

In China, illicit drug (including meth) use is seen as a serious deviant behavior that needs compulsory treatment (Liu et al., 2016; Zhang et al., 2016). The two-year institutional compulsory treatment, which involves vocational training, psychoeducational training, and training of independent living skills and drug knowledge, is the most commonly used way to treat all drug users (any kind of drug, both men and women) who have at least three drug-use records from police (Anti-Drug Law of the People's Republic of China, 2007; Liu & Hsiao, 2018). Supposedly, drug users who are given such institutional

treatment have a higher level of addiction severity than those who are placed in the community-based treatment (Liu et al., 2016), which is also compulsory and gender-neutral. Individuals who have been identified by the police for drug use for at least one but fewer than three times will have to receive the community-based treatment; and those who have completed institutional treatment also required to take additional recovery programs in the communities (Liu & Chui, 2018; Zhang et al., 2016).

Although studies on Chinese drug epidemics and treatment have grown substantially in recent years, research on drug users' own perspectives on their drug use behaviors is still scarce. Existing research rarely takes a specific focus on meth addiction, not to mention the experiences among female drug users. Considering gender is a crucial factor in studying drug use behaviors (Ahamad et al., 2014), this study aims to present a systematic research on Chinese female drug users' meth use experiences and also their understandings of meth addiction. More specifically, this study intends to answer the following two research questions: (1) How do Chinese female drug users define and understand addiction through their meth use experiences? and (2) Why did Chinese female drug users maintain their meth use behavior?

Methods

Thematic analysis, a widely-used qualitative approach was used to identify patterns and themes of meth addiction generated from interview transcripts among 49 female drug users in this study (Braun & Clarke, 2006; Levitt et al., 2018). The data analyzed in this study was part of a large project on Chinese drug users' lives. The project was implemented between 2013 and 2016 and had several rounds of qualitative and quantitative data collections on drug users (including male and female) who were under compulsory institutional treatment. The research protocol of this project was reviewed and approved by the School of Social and Behavioral Sciences at Nanjing University. The administrators of treatment institutions where the project was conducted accepted the participants' protection of a Human Subjects Protocol.

In this study, only qualitative data from female meth users are analyzed and presented. The research team reached out twice to the Chinese female meth users during the entire data collection period. These women were all residents from compulsory drug treatment institutions that are located in an eastern Chinese province, indicating that they had all been caught by police due to their drug use behaviors for at least three times, and also been marked as "more addictive" to drugs. Institutions' administrative officers were involved in the sampling process due to the exclusive nature of these institutions. To meet the criteria of maximum variation (Miles & Huberman, 1994) based on the purposive

sampling strategy, the research team asked administrative officers to invite potential research participants with various socioeconomic and demographic backgrounds, as well as different drug use histories. Potential participants were free to decline to participate in the study without any penalties. Finally, 64 female drug users with diverse backgrounds participated in the interviews, and four women declined. Participants all signed informed consent forms before their participation.

Amongst the 64 cases, we selected those who used meth regularly, since the research goal was to explore female drug users' experiences of meth addiction. Eight out of the 64 women did not report any meth use experiences, while seven reported that they had only tried meth once but never continued as they "did not like the feeling." Therefore, this left a final sample of 49 women participants. The age of these 49 female meth users ranged from 16 to 55 years, with an average age of 31.02 years. Half (24 out of 49) of the participants had received nine years of education or less, and only five had college experiences. Twenty-two participants reported that they had full-time or part-time working experiences before entering the institutions; another 11 were self-employed or doing small business; eight shared that they worked in sex industries; and the rest eight were unemployed. As for marital status, 39 participants reported being single (including divorced and widowed), while only seven participants were married (including cohabitation). Fifteen participants reported experiences of using drugs other than meth, and heroin was the most cited one (12 cases).

Data collection procedure

Semi-structured interviews were used to solicit the views of meth users (Flick, 2014). During the interviews, participants were encouraged to share their stories on meth addiction based on, but not limited to, the interview questions which reflect the research goal. Although these women underwent compulsory treatment, they still shared diversified experiences and opinions on meth use and meth addiction. All interviews were recorded and completed face-to-face in Mandarin Chinese, and each interview lasted between 60 and 90 minutes.

Eight research assistants who were well trained with interviewing skills were interviewers. To ensure the trustworthiness of the data, the first author provided two types of training to the interviewers: The first one was held before the commencement of the interviews, and that it facilitated the interviewers to understand the role of structural factors, such as marginalized social positions, in influencing people's drug use behavior, thereby reducing their possible negative perception on drug use (Liu & Chai, 2020). The second one was the ongoing supervision which was provided throughout the data collection period, to help interviewers when they encountered difficulties during

fieldwork. Through the training, research assistants learnt how to remain respectful toward the research participants in order to allow them to speak freely and candidly (Liu & Chai, 2020; Shenton, 2004).

Data analysis

All interviews were transcribed verbatim and then analyzed following the six-phases procedural guideline that was proposed by Braun and Clarke (2006). These six phases are: (1) familiarizing with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report (Braun & Clarke, 2006; Chui, 2016).

On top of interviews, we applied the repeated and close line-by-line reading of the transcripts, which enabled us to be familiar with "depth and breadth" of the data (Braun & Clarke, 2006, p. 87). Notes were made to mark down the ideas generated during this first phase. With the clear research aim and two specific research questions, the coding and themes identification process was "analyst-driven" rather than "data-driven." Several initial codes that are related to the research aim and questions, such as "meth is not physically addictive," "the use of meth is controllable," "not regards herself as a meth addict," "enjoy the feeling of using meth," "only use meth when meeting friends," "use meth to keep fit," "meth is good for easing stress," "meth is used to deal with drunkenness," and "meth is a medicine" were generated during the second phase. In the third phase, several mind-maps were used to sort and organize different codes into themes and sub-themes. The "relationship between codes, between themes and between different levels of themes" were carefully considered (Braun & Clarke, 2006, p. 89). Then in the fourth phase, the candidate themes were reviewed and refined and finally came to a clear, completed, and balanced presentation of the stories shared by the participants. We then further defined and refined the themes in the fifth phase and, at last, achieved two main themes that were named as "experiences and understanding of meth addiction" and "rationalization of meth use behavior." Under which, several sub-themes were identified and named and, all are presented in the next section. Finally, after the six-phases analysis, participants' narratives of meth addiction experiences were characterized, interpreted and structured around the themes (Sheridan et al., 2009).

Results

Experiences and understanding of meth addiction

When asked about their understanding of meth addiction, Chinese female meth users generally highlighted that meth is not an addictive drug. While users refused to admit their

physical dependence on meth, they mostly agreed that they had dependence psychologically.

Physical addiction experiences: "Meth is not addictive!"

The vast majority (32 out of 49) of female meth users opined that meth is not addictive; at least, it is "not physically addictive" (Case 2). They did not perceive themselves as "meth addicts" either. One participant described her understanding of using meth as, "I use it as I like and won't feel uncomfortable if keep it away" (Case 44). "I don't think meth is addictive," another participant said, "nothing bad happened as I kept using it" (Case 49). Among these 32 participants, 19 of them further explained that meth is different from heroin because heroin is considered to be "highly addictive" while meth is "just a thing for fun, without causing any physical addiction" (Case 19).

Moreover, personal control was highlighted by seven participants in denying overdose, which is in accord with the neoliberal ideology of autonomy (Decorte, 2001; Riley et al., 2010). Literally, "I can control the use" was the mentioned fact in proving meth is non-addictive. One participant illustrated how she controlled her dose:

The craving for meth can be managed. I won't become an addict as I use meth within controllable limits. It doesn't bring any physically addicted symptoms to me, even though I've used it for quite a while. (Case 11)

While a majority of female users emphasized that meth is not addictive, around one-third (16 out of 49) admitted that they had experienced health deterioration, or at least some physical symptoms and changes due to meth use. Common experiences included being in a state of hysterical excitement or very energetic (Cases 1, 7, 8, 38, and 41), having visual and auditory hallucinations (Cases 2, 21, 27, and 42), memory declining (Case 29), bad temper or mood disturbances (Cases 10, 30, and 33), paranoia (Cases 37 and 47), and pulmonary and heart diseases (Case 40). These symptoms were consistent with previous empirical findings that meth use is related to negative physical and psychiatric health consequences (Marshall & Werb, 2010; Potvin et al., 2018; Zhuang & Chen, 2016).

Psychological dependence: "I am indulging in the feeling of using meth."

Different from the belief that meth is not physically addictive, more than half (29 out of 49) of the participants agreed that they had psychological dependence on meth. As a synthetically produced amphetamine-type stimulant, meth can arouse strong central nervous system effects that bring about users' euphoria and excitement (Ma et al., 2013; Zhuang & Chen, 2016). "I am always thinking about the feeling of using meth - very comfortable and

enjoyable,” said one participant (Case 1), “although I don’t think I am addict to it.” Similar statements came from other participants:

For me, meth is a thing that makes me happy and energetic. I can use meth for the whole night to enjoy the pleasure it brings to me. I hate the days without meth and want to use it every day. (Case 17)

“Miss the feeling of meth” (Case 3) typically came up when participants felt that “life is boring” (Case 19) or when they “had nothing else to do” (Case 33). One participant said:

Nothing is interesting in my life. Meth can make the time go faster. Every time I use it, days go by easily. It’s really a good thing to kill time. I always want to use it when I feel bored. (Case 23)

This psychological dependence emerges especially when meth users see the drug. One participant said: “I think I psychologically depend on meth. Whenever I see the drug, I cannot control myself” (Case 46). A few other participants even revealed that they would want meth right away whenever they hear people talking about it (e.g. Case 1). The findings here confirm previous research results that women might be more dependent on meth (Bairan et al., 2014; Brecht et al., 2004; Dluzen & Liu, 2008), particularly from a psychological perspective.

Rationalization of meth use behavior

As a popularly consumed drug, meth is used for not only recreational but also instrumental purposes (Boeri et al., 2009; Lende et al., 2007). Participants of this study tried to rationalize their meth use behavior by highlighting the instrumental purposes. Meth use is thus considered as a necessity in either their social life or improving their physical and mental well-being.

Social necessity: “I only use meth when socializing with friends.”

Thirty-eight participants (out of 49) mentioned “social necessity” when rationalizing their meth use behavior. One woman illustrated her experiences:

I need to socialize with friends, who are all meth users. I can’t imagine other things to do besides using meth when we are together. But I don’t use it without restraint. I never use it when alone since I’m not an addict. Meth is only an indispensable thing in my social life. (Case 28)

Some participants even argued that “meth is so widely used and has become a common social necessity” (Case 28), “people use meth when they are gathering, just like people dine out together for social purposes” (Case 9). In another scenario, meth is also used to host guests as warm hospitality:

Tea, coffee, or cigarettes were used to treat guests in old times, or people could dine out together. Now, we mainly use meth for fun and enjoyment. My friends and I all love it. Meth is a necessity when we gather or when we have friends to treat. (Case 1)

Since participants once were mainly surrounded by their drug use peers, they generally believed meth use was an acceptable or even expected behavior in their interpersonal contacts. It is demonstrated that meth is socially accommodated (Peretti-Watel & Moatti, 2006; Williams, 2016) by peers and embedded into these women’s social lives. Thus, Chinese cases are in accord with the previous research findings that social circles, peer influences, and social pressure are essential in women’s, particularly white women’s use of meth (Boeri, 2013; Kerley et al., 2014). One participant confessed that “friend circle is important,” and “you have to use meth if you are part of the circle because everyone else uses it” (Case 40).

Other instrumental use for physical and mental well-being

Besides social necessity, another type of necessity of meth use is for users’ physical and mental well-being. These instrumental reasons, which were referred by 33 participants, include relieving stress, keeping fit, medical use, and dealing with the alcoholism.

Meth use is found to be associated with mental health and functioning improvement (Lende et al., 2007), especially among female users (Bairan et al., 2014). Similar instrumental reasons were shared by participants in this study, including coping with tension and anger, easing stress, alleviating life pressures, and reducing the negative feelings of worthlessness and depression. Twenty-one women highlighted that using meth is a way to “fight against bad emotions” (Case 30) and “deal with the emptiness and loneliness” (Case 33). “I only use meth when I feel harassed,” one participant said, “it’s just similar to other people’s seeking solace in drinking” (Case 18). Participants also emphasized how all annoyances would go away and they would enjoy the relaxed feeling after meth use:

When using meth, I concentrate on the feeling of the drug and forget about the unhappiness in my life. If I stop using the drug, all bad things and troubles are coming back, which I can’t bear. When I encounter problems that I don’t have the ability to solve, the only thing I can do is to use meth to escape from the bad mood. (Case 23)

Keeping fit is another critical reason raised by the participants for their continuous meth use behavior, which is also in accord with previous research findings (Bairan et al., 2014; Semple et al., 2005). Sixteen women mentioned meth’s “magic” effect in losing weight and were willing to maintain using for their ideal figure, although they refused to admit the addiction. “I can’t bear myself to be a fatty,”

one participant presented her opinion, "girls want to be beautiful and so do I. This leaves me no choice but use meth to keep fit" (Case 3). Another participant mentioned that she wanted to use meth when others criticized her body:

I don't regard meth as an addictive drug; I only take it as a weight-reducing medicine. I remember one day I went shopping, when the shop assistant said I was not able to fit in any available sizes of a beautiful dress, I felt agitated and wanted to use meth immediately. (Case 49)

Self-medication, in addition to weight control, is found to be another functional imperative for women to use meth (Bairan et al., 2014) and mentioned by five participants in this study. "For me, meth is a medicine," one middle-aged woman with one-year meth use history (Case 25) said, "I use it to alleviate pain." Besides easing pains, "curing diseases" is meth's another type of medical use. One participant viewed meth as an "effective medicine" that helped her "fully recovered from a bad cold" (Case 29) within a day after use.

Moreover, according to four participants, "positive consequences" of meth use also include dealing drunkenness or the effects of alcohol. For these women, meth is a useful therapeutic medicine to counteract their alcoholism issue. "Meth is beneficial and can sober me up in a short time when I drink too much," said one participant who loves to "drink in pubs" (Case 15).

Discussion

Chinese female meth users in this study generally believe that meth is not addictive, and thus, should be "safe" to use. This idea mainly comes from the different physical experiences registered in comparison between the use of meth and heroin. Based on the traditional heroin-centered drug education in China (Liang & Zheng, 2015; Liu et al., 2016; Liu et al., 2018), the participants' understanding of "addiction" is limited at the physical symptoms due to heroin use. Without arousing those similar symptoms, participants would mistake meth as a non-addictive drug, even though several people did report their experiences of health deterioration or negative physical and psychiatric symptoms. Female meth users unanimously reported that they loved the psychological feeling of using meth. However, since this feeling is different from the "heroin addiction," the psychological dependence was not being recognized as addiction either. Instead, they tended to rationalize their meth use behavior as a way of bringing happiness and enjoyment (Askew, 2016). Not admitting meth being an addictive drug is simultaneously a way to decline their "meth addict" identity, and thus distancing themselves from the negative social evaluation of illicit

drug users (Hathaway et al., 2011; Radcliffe & Stevens, 2008; Rhodes et al., 2011; Riley et al., 2010).

Not only being mistaken as a non-addictive drug, meth is also framed as acceptable and even desirable in Chinese female meth users' social lives. With limited education attendance and unstable employment status, female meth users of this study are mainly from a lower socioeconomic status. People from lower social classes tend to have a higher likelihood to be involved in the high-risk social settings, in which illicit drug use is generally perceived as acceptable (Hobkirk et al., 2016; Liu et al., 2018; Saw et al., 2017). Compared to the male counterparts, prior research has also found that female meth users are more likely to have psychosocial challenges including limited formal education, working skills, and income, which make them particularly vulnerable to meth use (Hser et al., 2005; Venios & Kelly, 2010). The broader structural marginalization probably promotes these women to enter interactions with other meth users and thus develop subculture that using meth can help them better integrated into the circle. This finding, in many ways, is consistent with the existing studies on "differentiated normalization" (Shildrick, 2002; Williams, 2016) which indicates that certain types of drugs and drug use behaviors are normalized among certain social groups, though being stigmatized and not tolerated in the mainstream culture. It also highlights the complexity of drug use and tolerance level among different populations from the perspective of social class and stratification (Askew, 2016).

As a central nervous system stimulant, meth is also used as an instrumental drug to increase energy and the general sense of well-being, especially among women (Elkashef et al., 2008; Lim et al., 2018). In accordance with prior research, a few participants in this study also emphasized on meth's medical applications and functional means, including relieving stress, keeping fit, alleviating pain, curing disease, and dealing with the alcoholism (Brecht et al., 2004; Lende et al., 2007; Liu et al., 2018). That said, "drugged pleasure" (Dennis & Farrugia, 2017) alone is not enough to rationalize the meth use (Askew, 2016); the functional effects that brought by meth use makes the rationalization stronger. Especially, meth's effects on mental health improvement and weight control confirmed not only the existing research findings on women's concerning on mental health conditions, but also in line with the gendered culture expectation to achieve the "tragic beauty" even though using drugs (Brecht et al., 2004; Liu et al., 2016). Comparatively, women are found to be more likely to engage in extreme weight loss practices and achieve the skinny body shape to represent men's perception of female attractiveness (Sukariyah & Sidani, 2014). Therefore, meth is a "good thing" to these female drug users: meth could benefit their social life, bring fun and enjoyment, as well as alleviate their problems, with less or no addiction.

Implications

The findings of this study call for targeted educational and interventional programs that echo the experiences of these female drug users, and in turn, reduce the possible health harms related to meth use. First of all, special educational programs that focus on meth and its health effects should be provided by primary and secondary schools, as the study reveals the lack of meth-related knowledge among female meth users. These programs are essential in helping people understand the adverse health consequences associated with meth use (Petit et al., 2012), while enhancing the public health services to keep pace with the growth of meth use (Zhuang & Chen, 2016), especially among young women. Considering that many Chinese female drug users dropped out of school at a young age, social media is particularly suggested to play a complementary role in drug education, helping spread the drug knowledge to a broader population (Liu et al., 2018). In addition, educational programs are also needed during treatment. For those who are unclear about the harms of meth and do not view their meth use behavior as problematic and need to be changed, the effect of the treatment would stay limited. For gender differences, women-oriented educational programs are mainly suggested to address harms and negative consequences of female meth users, since women often experience more and severer psychiatric symptoms, such as depression, after meth use (Dluzen & Liu, 2008; Semple et al., 2007; Shen et al., 2012).

Regarding the involvement of high-risk social networks in Chinese women's meth use behavior, it is also crucial to offer interventional programs to improve these women's awareness of drug dangerousness and self-protection abilities, and thus reduce group meth use behaviors (Broadhead et al., 1998; Latkin et al., 2003; Sherman et al., 2008). Early interventions should be launched to help new female meth users to avoid severe health issues due to meth dependency (Anglin et al., 2000; Sherman et al., 2008). For example, programs that educate people about negative health-related consequences of meth use (Parsons et al., 2007) would stop women who were inadvertently initiated into meth from continuing the use, while encouraging them to seek sobriety simultaneously. Also, programs aiming at improving positive circles are needed to help women who are in high-risk social networks. More social activities with non-drug users can reduce their chances of using meth with their drug peers; and thus alleviate the negative health consequences.

Female meth users respond more positively to treatments and show more significant benefits from treatment programs (Dluzen & Liu, 2008; Hser et al., 2005). However, the current Chinese drug treatment programs fail to address the functional aspects that could drugs bring to the users, which hinders Chinese female meth users' recovery from meth dependency. For example, some participants took meth as

a solution to their loneliness, bad emotions, or depression. These unfavorable mental health conditions may, primarily, be caused by their unhappy life events; it is commonly seen among women with lower socioeconomic status who do not have full control of their lives. Social support is argued to be very useful in helping vulnerable and marginalized women (Liu & Chui, 2014), as well as dealing with life predicaments (Baek et al., 2014; Giesbrecht et al., 2013). Precisely speaking, women are found to have a greater need for social support when it comes to facing stressful life events and in dealing with drug dependency (Faller et al., 2016; Tracy et al., 2010). Besides releasing mental pains, other functional use like pursuit of controlling weight, alleviating pain, curing disease, and dealing with alcoholism should also be addressed. Ignoring the relationship between meth use and the functional effects may lead to the failure of the treatment or relapse. Knowledge of such a connection may alert treatment providers to prepare better the treatment receivers to deal with the possible consequences that may occur during the treatment process.

Limitations and future directions

The major limitation of this study comes from the participants' recruitment process. Since participants were recruited with the help of the institution administrative officers, those who were closer to officers or those behaved well in the daily treatment might have greater chance to be recommended (Liu et al., 2018). In fact, the real selection process by the officers remained vague even under the requirement of recommending people with diversified sociodemographic backgrounds and drug-use histories. Given the limitations of this current study, future research could consider a similar study with community samples to avoid the exclusive nature of China's compulsory drug treatment institutions.

Conclusion

Based on a small-sized targeted convenience sample, this study discovered some detailed meth addiction patterns among Chinese female drug users. The study's findings represent a contribution to academia. First, this study explored a topic that has been scarcely studied. The findings provide insightful views of the complex experiences of meth addiction that can be used in future qualitative and quantitative studies, especially in the Chinese context and with female users. Second, this profound understanding of female users' meth addiction experiences would also contribute to the establishment of necessary strategies and policies to deal with the growing meth use problem among Chinese women. Based on the findings, this study finally suggests educational programs to provide sufficient meth knowledge to the general public and supportive interventions to reduce the negative health problems due to meth use in contemporary China.

Acknowledgement

Thanks to Ms Xuemeng Li from the City University of New York for consulting during the preparation of the article. Funding was provided by The National Social Science Fund of the People's Republic of China (19BSH029); and Jiangsu Provincial Social Sciences Research Key Project, the People's Republic of China (2018SJZDI119).

Conflict of interests

The authors of this article declare that there is no potential conflict of interests related to its preparation and publication.

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