



Research Paper

Understanding the reasons for using methamphetamine by sexual minority people in Dhaka, Bangladesh

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ABSTRACT

Background: Internationally, methamphetamine use is prevalent among males who have sex with males (MSM) and transgender women (*hijra*), with studies showing its association with risky sexual behaviours leading to HIV transmission. This study aimed to explore the underlying reasons for methamphetamine use among MSM and *hijra* in Bangladesh.

Methods: We conducted 30 in-depth interviews with MSM and *hijra* and six focus groups with MSM, *hijra* and service providers. Data were thematically analysed using manual data analysis procedures.

Finding: Reasons cited for using methamphetamine varied across feminized MSM (i.e. *kothis*), masculine MSM (i.e. *panthis*), male sex workers and *hijra*. For sex workers, increased sexual pleasure and consequent ability to take more clients increased their income. For *panthis*, methamphetamine enhanced feelings of masculinity and sexual prowess. *Kothis* were able to feel more feminine due to their ability to receive multiple partners each night. For all participants, methamphetamine restored self-esteem and relieved the stress resulting from stigma.

Conclusions: Findings indicate that reasons for using methamphetamine are not only rooted in the individual's psyche but also grounded in the socio-cultural expectations about masculinities and femininities in Bangladeshi society. Limited knowledge about the complexities concerning methamphetamine use mean that appropriate counselling and treatment services are non-existent in Bangladesh. The study findings can be used to refine national and international harm reduction policies so as to incorporate and address methamphetamine use.

Background

Methamphetamine is a psychoactive stimulant drug derived from Amphetamine Type Stimulant (ATS) which can be smoked, snorted, injected or orally ingested (Paulus, 2018). Methamphetamine use patterns may not be the same across all regions and countries, but ATS drugs are increasingly prevalent (Degenhardt et al., 2010; UNODC, 2018a, 2018b). ATS has become the second most commonly used illicit drug worldwide, after cannabis, with sharply increasing trends of use in the Asia-Pacific region in particular (Degenhardt et al., 2014; UNODC, 2018a, 2018b). Methamphetamine use has been highlighted as an emerging public health concern in several countries across the Asia-Pacific region, including Thailand, Malaysia, China and India (Guadamuz & Boonmongkon, 2018; Lim, Akbar, Wickersham, Kamarulzaman, & Altice, 2018; Liu, Chui, & Chai, 2018; Wilkerson,

Noor, Rhoton, Li, & Rosser, 2018).

Similarly, evidence from surveillance studies and rapid assessments carried out in Bangladesh indicate that methamphetamine use has increased. For instance, the number of methamphetamine users admitted to government drug treatment centres rose by 12% between 2016 and 2017 (DNC, 2017). Bangladesh has a continuous and abundant supply of drugs because of its proximity to the Golden Triangle of Laos, Myanmar and Thailand, as well as the Golden Crescent of Pakistan, Afghanistan and Iran (Rahaman, 2014; Talpur & George, 2014).

The international research literature has shown that methamphetamine is associated with various co-morbidities, mortalities and other adverse health consequences (Hittner, 2016; Kuo et al., 2011; Salo et al., 2011). For example, people who use methamphetamine are more likely to practise sexual risk behaviours compared to those who do not use the drug (Hittner, 2016) and this makes them more vulnerable to

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HIV. Populations from more socially disadvantaged backgrounds, such as marginalized groups and high-risk social networks, have been found to be more likely to use methamphetamine (Hobkirk, Watt, Myers, Skinner, & Meade, 2016; Saw, Saw, Chan, Cho, & Jimba, 2018) and this includes sexual minority groups (Chomchai & Chomchai, 2015; McKetin et al., 2018; Nerlander et al., 2018; Piyaraj et al., 2018). In Bangladesh, methamphetamine (popularly known as Yaba) use has been found among males who have sex with males (MSM), male sex workers (MSW) and transgender women (locally known as *hijra*) (ASP, 2017). *Hijra* do not conform to the traditional male-female gender binary, and belong to a specific sub-culture that is unique to the Indian sub-continent.

Yaba, the Thai word for “crazy medicine,” is a tablet that contains methamphetamine and caffeine (Cohen, 2014). Data from HIV behavioural and serological surveillance conducted in three districts of Bangladesh (Dhaka, Chattogram and Sylhet) found that 17% of the MSM and 15% of the *hijra* who were surveyed had used illicit drugs within the prior twelve months and of those, 74% of the MSM and 77% of the *hijra* had used methamphetamine within the past year (ASP, 2017).

Studies have identified a variety of reasons for methamphetamine use, including coping with psychological stress, enhancing sexual performance and increasing the pain threshold for receptive anal intercourse (Cohen, 2014; Hobkirk et al., 2016; Sewell et al., 2017). When designing and improving HIV prevention interventions, it is essential to consider the motivating factors for methamphetamine use, because of the known adverse health effects of methamphetamine and its association with increased HIV risk (Vosburgh, Mansergh, Sullivan, & Purcell, 2012). For example, studies have found that MSM who use drugs are more at risk of contracting HIV, while HIV-positive MSM who use drugs are more likely to transmit HIV via risky sexual practices and poor adherence to HIV therapy (McKetin et al., 2018; Shoptaw & Reback, 2007).

In Bangladesh, homosexuality, sex work and drug use are illegal. According to Section 377 of the Bangladesh Penal Code of 1860, sexual activity “against the order of nature with any man, woman or animal” (which indicates sexual acts between men or between women) is legally punishable either by life imprisonment or a fine alongside a pre-determined term of imprisonment (GOB, 2010, p-79). Further, Sections 11, 12 and 13 of the Human Traffic Act 2012; Section 373 of the Bangladesh Penal Code 1860; Section 236(1), Cantonment Act 1924 and Section 74, Dhaka Metropolitan Police Ordinance, 1976 (DMPO, 1976; GOB, 2012) prohibit sex work. There are also laws which enable the arbitrary arrest and detention of MSM or other Key Populations (KPs), particularly Section 52, Code of Criminal Procedure, 1898 and Sections 75, 80 and 86 of the Dhaka Metropolitan Police Ordinance 1976 (DMPO, 1976). The government has adopted a zero-tolerance policy towards drug use, which law enforcement agencies have striven to reinforce. In particular, the Bangladeshi Narcotics Control Act of 2018 mandated the death sentence or life imprisonment for individuals carrying methamphetamine for illicit use (GOB, 2018).

Besides the legal challenges, there are cultural implications. For example, among the mainstream community in Bangladesh, homosexuality is highly stigmatized, with male to male sex prohibited by Islam and considered sinful and socially immoral. Amnesty International has reported how human rights have been contravened in Bangladesh because of gender or sexual orientation, including by the denial of employment opportunities, torture in detention and refusal of housing or health services (Amnesty International, 2018). Sex work or non-marital sexual encounters are taboo in conservative Bangladesh (Ebert, 2012) and strictly prohibited in Islam (Esposito, 2009). Further, people who use drugs - another social taboo - are highly marginalised from mainstream society (Khosla, 2009). Consequently, some sexual minority people who use methamphetamine also sell sex and this leads to additional societal stigmatisation and discrimination. These legal and cultural inhibitions have propelled them into the socio-cultural margin

of society, which increases their vulnerability to sexual risk behaviours.

Internationally, HIV programmes increasingly recognise illicit drug use among MSM as an area that warrants attention (Nerlander et al., 2018). However, drug-related issues can be challenging to address within the current conventional HIV intervention modality for sexual minority people. This makes it essential to explore their reasons for drug use in order to better design and develop harm reduction interventions and it is this gap in knowledge that our study has sought to address.

The research had four objectives. To: i) explore patterns of illicit drug-using behaviour (e.g. types of drugs, frequency and mode of use, availability and accessibility) among sexual minority people who use methamphetamine in Dhaka; ii) understand the underlying reasons for using methamphetamine; iii) describe its effects on the sexual life of sexual minority people; and iv) examine their experiences of HIV prevention services. This article focuses on the second objective - the underlying reasons for methamphetamine use among sexual minority people.

Methods

This exploratory qualitative study aimed to understand the reasons for methamphetamine use among sexual minority people through in-depth interviews (IDIs) and focus group discussions (FGDs). Evidence from surveillance suggested upward trends in Yaba use among sexual minority people in Dhaka, so the study was conducted in Dhaka city. Four of six Drop-in Centres (DICs) in Dhaka were selected to take part in the study. These were run by the implementing partner (i.e., Bandhu Social Welfare Society) working with the Global Fund Project of the International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b). Data were collected from MSM, MSW and *hijra*, aged 18 years or above, who were either using Yaba during the study period or had used Yaba within the six months prior to their participation in the study. The Research Review and Ethical Review committees (RRC and ERC) of icddr,b approved the research protocol.

In-depth interviews (IDIs)

IDIs (N = 30) were conducted using a maximum variation sampling approach (Patton, 2015) in order to include MSM, MSW and *hijra*, with diverse socio-demographics and varying sexual practices. This sampling approach was chosen in order to identify and describe the themes that are common to a small diverse sample (Patton, 2002, 2015). MSM, MSW and *hijra* who use Yaba remain inter-linked but in hidden networks, therefore a snowball sampling approach was used in order to reach and interview the study participants. The DIC staff assisted the researchers in recruiting IDI participants in the early stages of the study. After conducting some initial interviews both the interviewees and ‘guides’ (sexual minority people who were recruited to help find study participants and collect informal data) helped the research team further explore the network of sexual minority people who use methamphetamine and recruit more IDI and FGD participants. Moreover, a few *hijra gurus* (leaders) helped the researchers recruit *hijra* participants since most *hijra* stay under the shelter of their *guru*. The researchers chose safe and uncrowded venues to maximise privacy, including participants’ residences, DIC premises and nearby parks, depending on the participants’ preferences. In turn, this helped to facilitate the free exchange of sensitive information, thus enhancing the credibility and authenticity of the interview findings.

Focus group discussions (FGDs)

FGDs were conducted after completion of the IDIs. Complex issues that had not been discussed in IDIs were debated during FGDs. Two FGDs were conducted with MSM and MSW, two with *hijra*, and two with DIC staff, involving a total of 39 FGD participants - 26 sexual

minority people and 13 DIC staff. The FGD-participants were purposively selected based on their knowledge and understanding of the dynamics of Yaba use, as well as their willingness to participate in discussions. MSM and *hijra* participants of FGDs were mutually exclusive from IDI participants in order to cover a diversified group. These FGD participants described their own and their friends' experiences and discussed the reasons for using Yaba. These insights also helped triangulate the findings from IDIs.

In addition to interviews and focus groups, researchers took handwritten field notes on relevant issues, such as the feelings and expressions observed among the study participants during the interviews. This approach helped the research team gain further insights from the IDI and FGD findings.

Data collection procedure

IDIs and FGDs were conducted by a research team composed of sociologists and anthropologists, all of whom are professional researchers and have worked for over five years in the field of drug use, sexual behaviours and HIV. The researchers received rigorous training in qualitative research methods and had worked on several previous qualitative research studies in Bangladesh, focusing on similar areas. In addition, three members of the community were recruited as guides (both MSM and *hijra*) to work directly with the research team and to collect informal data. The guides also helped to interpret interview data, allowing for emic perspectives.

IDIs and FGDs were conducted using separate open-ended guidelines. Issues that had not been considered initially but had emerged during ongoing data collection and preliminary data analysis were incorporated into the guidelines.

Verbal consent was collected from the participants and this was digitally recorded with their prior approval. All recorded interviews and discussions, which were done in standard Bengali, were transcribed by listening to the digital recordings line by line. Bengali transcripts were not translated into English since all team members were native Bengali speakers. The senior members of the research team analysed the Bengali transcripts, while preserving the meanings of the local terminologies. During preparation of this manuscript, the relevant findings were translated into English.

Data analysis

Descriptive and interpretative analytical methods were used within the thematic analysis framework. There were six steps to the thematic analysis (Braun & Clarke, 2006): familiarising the research team with the data through repeated and comprehensive reading of the interview transcripts; generating initial codes and collating the relevant data for each code; searching for key themes related to reasons for taking Yaba based on these themes; formulating a thematic matrix for further analysis; and labelling each theme and defining its scope. Coding was done collaboratively to develop a collaborative coding framework (Saldaña, 2015). The field notes were analysed in a similar way to the interview transcripts.

In order to ensure scientific rigour, the four criteria proposed by Guba and Lincoln (1985) were followed - credibility, transferability, dependability and conformability. Various strategies were used, namely triangulation, peer debriefing and member-checking as suggested by Guba and Lincoln. Triangulation was achieved through the use of two or more data sources, data collection methods, investigators, theoretical perspectives and analytical approaches (Patton, 2015). Such triangulation enhanced the trustworthiness of the qualitative data and helped circumvent personal biases (Brink, 1993). The researchers regularly had debriefing sessions where findings were discussed, clarified and interpreted, while also used to contribute to the ongoing analysis (Ezzy, 2013). A member-checking approach was applied, where information and analytical interpretations were continually verified with several of

the informants (i.e. the sexual minority people) (Ezzy, 2013). This helps to ensure that the researchers have accurately transposed the participants' perspectives into analytical findings.

Socio-demographic features

IDIs and FGDs were conducted with participants from various sexual orientations and practices, such as feminised MSM (i.e. *kothi*), masculine MSM (i.e. *panthi*) and *hijra*. To elaborate, *kothi* are a group of men who belong to a self-identified feminised socio-sexual group, sharing a sense of community and collective sets of norms and ideals. Some may dress as the opposite sex and use make-up while cruising venues or attending social functions, in the interest of enticing clients. We also interviewed their masculine counterparts, the *panthi*, who represent diverse groups of men partaking in socio-sexual relations with *kothi* but self-identify as masculine men, most of whom are sex workers (Khan, Hudson-Rodd, Siggers, & Bhuiya, 2005). As depicted in Table A1, more than half of the IDI participants were between 18–25 years old. Most *kothi* and *hijra* participants cited sex work as their primary occupation. A few *hijra* participants reported both sex work and *badhai* (the traditional *hijra* occupation such as blessing a new-born child through dancing and singing (*bachcha nachano*) and collecting money from stores (*bazar tola*)), as their occupations. Some of the other study participants' occupations included transportation work, business, day labourers, students and private service holders. Many *panthi* participants cited transportation work as their occupation. The majority of participants were unmarried; only two *panthi* and three *kothi* were married and one *kothi* was divorced. Most participants were educated beyond the primary level, with very few beyond the secondary level. The mean ages of the MSM (including MSW), *hijra* and DIC staff who participated in FGDs were 28, 26 and 32 years respectively.

Findings

Findings indicated that Yaba is a commonly used term among sexual minority people and that they were not familiar with the term methamphetamine. The participants used various local terms for Yaba such as *baba*, *chudda*, *butam*, *guti*, *R7*, *chompa*, *WY* and *labori*. These terms are primarily used as secret code names to obfuscate their conversations, especially from law enforcement agents. Throughout this article, we have used the term Yaba and methamphetamine interchangeably.

Participants reported intranasal administration as the most common mode of ingestion of Yaba, which is done by using aluminium foil and a straw. However, one participant reported a method which involved crushing the Yaba into powder form, mixing the crushed Yaba into the tobacco and then smoking it like a cigarette. None of our study participants reported injecting or anally inserting Yaba.

Underlying reasons for taking Yaba

Study participants revealed several reasons for taking Yaba which they considered to be a largely positive act and of benefit to them.

“Yaba has helped me earn more”

Findings revealed that male and *hijra* sex workers consumed more Yaba compared to their non-sex worker counterparts. It is important to note that most of the *kothi* - who are physically attractive and young - often sell sex. The majority of *kothi* and *hijra* sex worker participants took Yaba to generate more money from serving more clients. Moreover, they also felt better equipped to perform sexual intercourse as per their clients' wishes, including their clients' desired sexual acts. Although the sex worker participants used lubricants, they reported that before taking Yaba, they had experienced anal pain after entertaining multiple consecutive clients. However, after taking Yaba, they could have painless anal sex even with multiple clients. A few IDI

participants reported that Yaba helped them stay awake for longer so that they could serve more clients. This phenomenon was also reflected in FGDs.

One *hijra* sex worker described painless sexual encounters in the following way:

Sometimes, I have to serve more than 10 clients per night. [...] when I take Yaba, my anus (*batty*) is able to handle any number of clients. Not only can I handle big penises of some *panthi*, I do not feel any pain at all. (*Hijra*, 23 years, IDI)

Kothi and *hijra* sex workers allowed their clients to have anal sex with them, yet they themselves also ejaculated during these encounters. After ejaculation, sex workers lost their interest and felt as if they could not entertain any more clients. However, in contrast, most sex worker participants stated that Yaba delayed their ejaculation thus allowing them to have more clients per night. One *kothi* sex worker said:

I take Yaba to get more clients at night. Every day, before going to night work (selling sex), I take Yaba. It delays my ejaculation and I can stay erect for longer. So, I can take up to 10–12 clients before ejaculating. Before getting into this drug, I could only take 2–3 clients per night. (*Kothi*, 25 years, IDI)

A *kothi* claimed that he became less selective about his clients after taking Yaba. He described being unwilling to take a client with an unpleasant body odour or unattractive style of dressing. However, Yaba helped curb his feelings of repulsion and he could have sex with anyone because he cared only about earning more money. This was corroborated in an FGD, where a *kothi* mentioned that “Yaba is the magic which has changed [his] taste for a person to have sex with” (*Kothi*, 33 years, FGD).

“Forgot the agony associated with being kothi or hijra”: A way to restore self-worth

Kothi and *hijra* participants revealed that they used Yaba to revive the social and sexual worth that they had lost. Many *kothi* participants indicated feelings of low self-worth because they faced immense criticism from family and outsiders due to their feminine mannerisms, and were often pressurized to behave “normally, like a man, not like a woman,” (*Kothi*, 32 years, IDI). Their relatives did not understand their inability to conform to masculine societal norms. Rather, they denounced the *kothi*'s effeminate behaviour, which they perceived to be deliberate and deviant. In turn, this feeling of alienation took a considerable toll on the *kothi*'s self-esteem and self-worth, and hence Yaba was their solace.

A few *kothi* and *hijra* in both IDIs and FGDs reported that they started using Yaba to mitigate their feelings of guilt and sadness associated with being *kothi* or *hijra*. After the initiation of Yaba, they felt some sort of relief and they claimed they “forgot the agony associated with becoming a [sexual minority person] in [their] life” (*Kothi*, 32 years, IDI). In addition, FGDs conducted with the counsellors concurred that many sexual minority people started taking Yaba because they found that this drug could mitigate their stress and help them restore the social worth that they lost because of isolation and ostracization.

In addition to increasing social self-worth, Yaba also helped participants increase their sexual self-worth and self-confidence. Before initiating Yaba, a *kothi* reported that he was unable to confidently communicate and negotiate issues with his clients. Likewise, a *hijra* sex worker stated that Yaba helped increase her self-confidence in the same manner. She explained that:

I take Yaba before night work (selling sex). Without Yaba, I feel like I cannot attract clients. Before, I had no self-confidence; being a *maigga* (feminine man), I hesitated to approach a male for having sex. I used to worry whether they would respond negatively or beat me. When I started taking Yaba, I could approach males without any hesitation. (*Hijra*, 35 years, IDI)

In all FGDs, the MSM and *hijra* participants unanimously claimed that Yaba helped heighten their confidence. In other words, they could negotiate with clients for higher rates per sex act. Some even claimed that Yaba helped increase their physical and hence sexual stamina. Some *panthi* participants stated that before taking Yaba, they felt like they could not have sex every night despite wanting to. However, taking Yaba on a daily basis helped enhance their confidence and stamina. One *panthi* explained:

In order to enhance my self-confidence as a man, I take Yaba every night. It has increased my self-confidence to have sex with more than one partner per night. I feel so confident. I can even entertain multiple partners at a time, just like in group sex (*Panthi*, 28 years, IDI).

A few participants reported using Yaba to revive their sexual enjoyment which had waned for several reasons, including the long-term use of Phensedyl (a cough syrup containing codeine) and other drugs which had diminished their sexual desires, thus impeding their sex lives. Participants reported feeling that Yaba had helped to revive their sex life. One *kothi* explained:

When I used to take Phensedyl, it almost ruined my sexual desire and pleasure. Then I came to know that there is a drug that can boost sexual urges and make sex more pleasurable. Then I started to use this drug as an experiment. When I took it, I felt that it increased my sexual desire. Now I always take Yaba for having sex. Without it, I do not get sexual urges. (*Kothi*, 29 years, IDI)

Yaba-dependent sexual satisfaction: “Now without Yaba, I cannot enjoy sex”

The majority of *panthi* claimed Yaba augmented their excitement and enjoyment of sexual intercourse. They claimed that their first sexual encounter after Yaba was better than all their previous encounters, thus encouraging them to take Yaba regularly. They explained that Yaba magnified their enjoyment of various sex-related activities, such as hugging, kissing and oral and anal intercourse. Moreover, participants reported that Yaba would help delay the ejaculation that would have happened if they were engaging in foreplay.

As stated before, *kothi* and *hijra* who generally served receptive sex roles stated that prior to taking Yaba, they often experienced early ejaculation while having receptive anal intercourse, thus reducing their enjoyment of intercourse. Yaba helped delay their ejaculation, which in turn, prolonged their sexual pleasure.

Notably, a few *kothi* and *hijra* stated that because of Yaba, they derived pleasure from getting beaten or spanked by their sexual partner. Conversely, some *panthi* reported that while under the influence of Yaba they obtained sexual pleasure by hitting or pretending to discipline their sexual partner during sexual intercourse. One of the *kothi* participants reported being disciplined by his partner, which evoked sexual pleasure. He stated “this feeling started after starting Yaba. It was never like this before. Now, without [Yaba] I do not get any sexual satisfaction” (*Kothi*, 25 years, IDI).

One of the peer educators of the DIC, who is well-networked with other sexual minority people who use Yaba, described how sexual minority people, under the influence of Yaba, had a growing interest in diversified sexual acts and in re-enacting what they saw in pornographic media. Since Yaba prolonged their sexual performance, they were more eager to experiment with sexual activities in new dimensions. A *panthi* verified an experience where he replicated a scene that he saw in a pornographic movie because he wanted to maximise his sense of sexual pleasure with the aid of Yaba.

“If I can't satisfy them no one else in the world can”: A way to enhance masculine and feminine sexual pride

While *panthi* MSM take on conventionally masculine roles, *kothi* MSM and *hijra*, on the other hand, assume more feminine roles.

Therefore, findings revealed that they felt the need to fit into their respective gender role by exhibiting the appropriate sexual behaviours. For example, most *panthi* participants claimed that their ability to engage in multiple sexual encounters in a single night allowed them to showcase themselves as a sexually strong man (“*birjoban purush*”). All the *panthi* participants claimed that they took Yaba because it helped delay their ejaculation and prolong sexual intercourse, thus also highlighting their masculine traits. In essence, *panthi* participants reported that showing masculine sexual pride was one of the motivating factors for taking Yaba. One *panthi* explained:

One night, I had sex twice with my wife while I was under the influence of Yaba. My wife was very annoyed with me and she was unable to have a third round so she refused. At that time, I felt like a proud husband because my wife accepted her ‘defeat’ whereas other women argue with their husband, demanding sex for a longer time. I can do the same when I have sex with *hijra* or a *kothi*, who like me for my sexual stamina. Sometimes, they do not take money; rather they just want to be my sex partner. (*Panthi*, 33 years, IDI).

Moreover, *panthis* felt even more empowered if they could perform sex acts to such an extent that their client or partner is imploring them to stop the sex act. For them, this engendered an unfathomable sense of pride. For instance, a *panthi* participant said:

One day, a *kothi* told me that I would never be able to satisfy him sexually. I replied that if I can’t satisfy him then no one else in the world can [...] He (that *kothi*) invited me to his room. I seriously rose to the challenge. That night, I took two large Yaba tablets before having sex. We had sex for 40–50 min. Towards the end, he begged me to stop. Being a man, I felt different that day. It seemed like I was a ‘real’ man (*aasol purush*). While having sex, being a man, I always wanted to have sex for a long time and that my partner (*kothi* or *hijra*) would request me to stop. I take Yaba because it helps me to prove my sexual strength. (*Panthi*, 26 years, IDI)

While *panthi* played more penetrative roles in their sexual partnerships, *kothi* and *hijra* played more receptive roles. The ability to maintain multiple partners and perform diversified sexual acts, such as anal and oral sex, provided a sense of sexual pride and fulfilment for *kothi* and *hijra*, both of whom primarily played passive and feminised roles in their sexual encounters. Few *kothi* and *hijra* participants claimed that their peers always glorified those who could entertain multiple partners. Therefore, some participants used Yaba to amplify their sexual performance so that they could endure more sexual partners per night. They believed that this helped them showcase their sexual capability and hence their feminine sexual pride. One *kothi* noted:

If someone maintains fewer partners, our *gothia* (sisterly friends of *kothi* or *hijra*), says that ‘he definitely could not satisfy his partners’. It is seen as a disgrace. I regularly take Yaba, so many *panthi* come to my room. I often have to refuse some of them. They come to me since I can fulfil their various sexual demands. I can perform sex for a long time. When my *gothia* said that I am very capable of satisfying my partners, I felt proud as a female, because I could do something that even actual females cannot do. (*Kothi*, 28 years, FGD)

Yaba: an alternative way to tackle stigma

Participants reported that they faced various types of stigma including self-perceived stigma and enacted stigma from their family members and society. The reasons for stigmatisation are mainly rooted within the criminalisation of male-to-male sex, religious prohibitions of homosexuality, pervasive cultural silence and lack of awareness and sensitization about sexual minority people. Sexual minority people can therefore feel socially marginalised and alienated. Participants reported that it was emotionally difficult for them to deal with such feelings and adverse experiences and they regarded Yaba as an escape route from negative situations.

Moreover, participants attributed their mental sufferings to the stigma that stemmed from engaging in male-to-male sex. When they felt like this stigma was taking an emotional toll on their lives and their well-being, they saw Yaba as their remedy. One *kothi* explained:

As a *kothi*, I did not want to marry a woman. Because of this, my family members blamed me for destroying their family reputation. Allah has given me male organs but not a male mind. So, pressure from family and others made me mentally upset. To get relief from this situation I started taking Yaba. Now I feel like I am doing fine. (*Kothi*, 32 years, IDI).

Furthermore, FGDs with counsellors and other service providers, as well as sexual minority participants, corroborated the finding that many sexual minority people took Yaba to relieve the stress associated with stigma. A *hijra* shared her painful experience in an FGD:

I was responsible for breaking my sister’s marriage. Everything was finalised about her marriage, but the groom’s family somehow came to find out about my feminine preferences and changed their decision. They informed my parents that they cannot allow their son to marry the sister of a “*maigga pola*” (feminine boy). My family and relatives were very angry with me and asked me to leave our home. I knew it happened because of me. Since then, I have not shown my face to my family, and have started taking drugs including Yaba to forget all these shameful events (*Hijra*, 26 years, FGD).

Discussion

This is the first qualitative study in Dhaka, Bangladesh to describe the underlying reasons for use of methamphetamine among sexual minority people. While these findings cannot be generalised, the study has highlighted reasons for methamphetamine use which may be unique to the local cultural context but may also be relevant to the dynamics of sexual minority people in other countries. These underlying reasons for taking methamphetamine do not always mirror findings from research conducted elsewhere. For example, Horbik et al.’s study outlined peer pressure, lack of recreational and employment opportunities, and gang membership as reasons for taking methamphetamine (Hobkirk et al., 2016). Whereas, our study explored methamphetamine use through other dimensions, such as showcasing masculine and feminine sexual pride, in addition to the restoring social and sexual worth.

All groups of sexual minority people in this study reported that using methamphetamine enhanced their sexual pleasure, a finding depicted elsewhere (Lim et al., 2018; Lorvick et al., 2012; Tan et al., 2018). Similarly, the enhanced sexual urge and performance resulting from methamphetamine use allowed *kothi* and *hijra* sex workers to entertain more clients and in turn generate more income. This phenomenon was corroborated in other international studies among female sex workers (Gryczynski, Schwartz, Salkever, Mitchell, & Jaffe, 2011; Maher et al., 2011). However, similar evidence about methamphetamine increasing sex work performance has yet to be found among sexual minority people.

This study also revealed that *panthi* took methamphetamine as it increased their sexual prowess, thus making them feel more masculine. Studies conducted both in Bangladesh and USA depicted the ability to have prolonged sex as a symbol of sexual masculinity (Halkitis, Green, & Wilton, 2004; Khan et al., 2008). However, this study also showed feminine sexual pride as a recurring reason for taking methamphetamine among *hijra* and *kothi* sex workers, which has not been evidenced in other literature.

Our findings indicated that participants used methamphetamine as a way of relieving the unhappiness and mental agony associated with being in a sexual minority, thus restoring their social and sexual worth. Using methamphetamine to cope with distress or to forget stressful memories has also been reported elsewhere (Watt, Myers, Towe, &

Meade, 2015). In addition, our study found that sexual minority people felt alienated by their families and society members who expected them to conform to social and sexual norms. Dealing with alienation by taking methamphetamine as self-medication for the resulting unhappiness, is particularly prominent due to the religious prohibition and societal stigmatization of non-heterosexual practices, behaviours and mannerisms. This aligned with Khantzian's "self-medication hypothesis" (Khantzian, 1997) and studies in other countries where sexual minority people took methamphetamine in order to relieve the stress incurred by stigma (Jerome & Halkitis, 2009; Li, Okafor, Gorbach, & Shoptaw, 2018; Semple, Strathdee, Zians, & Patterson, 2012).

When considering the public health implications of methamphetamine use, it is important to note that sexual minority people do not always remain in isolation. Rather, their HIV risk behaviours could transcend to other populations, particularly other key populations at risk of HIV. Surveillance findings from Bangladesh indicated that 95% of the MSM had male sex partners, while 1.0% had *hijra* sex partners. Surveillance findings also revealed that many of these sexual encounters entailed unprotected sex. Furthermore, 2.5% of the MSW participants reported that they knew their sex partners or clients were injecting drug users. It is important to note that People Who Inject Drugs (PWID) are also facing an epidemic of HIV, as corroborated in surveillance findings depicting a 27% HIV prevalence in a neighbourhood in Dhaka city (ASP, 2017). This implies an added HIV vulnerability for sexual minority people who, in particular, reported taking methamphetamine and engaging in unsafe sex, as documented in the last surveillance report (ASP, 2017).

Although there are a variety of recommended population, community and healthcare platform interventions for curbing illicit drug use, studies have also shown the limited effectiveness of some of these interventions, particularly in lower-middle income countries (LMIC). For example, cognitive behavioural therapy is employed in various detoxification programs worldwide, but studies have shown that these programs have little effectiveness in reducing dependence on ATS drugs (Degehart, Stockings, Strang, Marsden, & Hall, 2015; Jalali, Hashemi, & Hasani, 2018). Moreover, the contingency management approach was implemented in some developed countries but studies have shown that this approach did not have a significant or sustainable impact on the reduction of methamphetamine use (Menza, Jameson, Hughes, Colfax, & Golden, 2010). It is worth mentioning that these types of approaches are non-existent in Bangladesh for any population group.

Worldwide, there are very few treatment and prevention protocols for methamphetamine, even less for socially marginalized groups such as sexual minority people (Jalali et al., 2018; UNODC, 2018a, 2018b). These findings could be used to help develop national and strengthen international protocols for treatment and prevention, protocols that would help reduce the harms associated with taking stimulant drugs, while also being culturally sensitive to the needs of sexual minority people.

It is important to note that there is a paucity of supportive harm reduction initiatives for people who use ATS within the national drug policies of Bangladesh and many other countries in Asia (HRI, 2018; NASP, 2016), excepting a few countries such as Myanmar and Indonesia (Praptoharjo, 2015; WHO, 2017). There are also limited harm reduction approaches to support sexual minority people in Asia, barring a peer outreach project in Indonesia (Rigoni, Brecksema, & Woods, 2018).

Considering the reasons for taking methamphetamine are grounded in socio-cultural realities, there are various intervention approaches that could be considered. For example, sensitization efforts could be launched by facilitating advocacy initiatives with community gatekeepers such as local community leaders, government stakeholders and officials of the narcotics control department and law enforcement agencies. This could include initiatives for reducing stigma relating to drug use and sexual diversity, reformation of the punitive drug policy and law, including harm-reduction focussed drug policies, while also

upholding public health priorities. It is crucial, therefore, to incorporate information generated from the research findings into the national harm reduction policies, not only in Bangladesh but also in other LMICs in the region.

Limitations and directions for future research

The study followed non-probabilistic purposive sampling because of the stigmatized behavior and hidden nature of the population, although this sampling technique inherently suffers from selection bias. We attempted to minimise bias by applying maximum variation sampling. Like other LMICs, the scope of harm reduction services for HIV prevention is becoming increasingly constrained in Bangladesh due to lack of funding and dependency on international donors (Kates, Wexler, & Lief, 2014). Harm reduction services catering to opioid drug use are currently emphasised in the existing harm reduction approaches under the umbrella of HIV prevention intervention models in LMICs. However, when higher income countries are planning and prioritizing research and funding initiatives for LMICs, it is important to consider harm reduction strategies for both opioid and stimulant drugs.

The findings of this study highlighted the underlying reasons for sexual minority people in Bangladesh to use methamphetamine. Research from various countries has identified how the role of methamphetamine might also be linked to issues such as psychological trauma, body image insecurities, anxiety and generally stressful environments for sexual minority people (Castro, 2016; Darke et al., 2008). These issues could be further explored through research in Bangladesh and surrounding LMICs. Furthermore, the relationship between methamphetamine use and gender roles could be an intriguing area for further exploration, since findings showed that participants took methamphetamine to enhance their respective masculine or feminine sexual pride.

Conclusions

These findings have opened a pathway for gaining a more comprehensive knowledge about the underlying reasons for using methamphetamine. Although reasons are rooted in the individual's psyche, they are also grounded within the socio-cultural realities of Bangladesh and other countries. Appropriate harm reduction interventions cannot be designed if the depth and complexities of these underlying reasons are not conceptualized and considered in a culturally sensitive manner. As the use of methamphetamine consists of multifaceted dimensions, it may not be possible to tackle the issue within the current HIV intervention modality. Thus, national and international policy-level stakeholders will need to address methamphetamine use with evidence-based approaches in order to implement more effective policies.

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Author contributions

Sharful Islam Khan: He performed as the Principal Investigator (PI) of the project, wrote and conceptualised the protocol, was responsible for overall supervision of data collection and management. He analysed data and wrote the manuscript. He will perform as the corresponding author as well.

Mohammad Niaz Morshed Khan: He worked as the Co-Investigator

of the project. He supervised overall data collection, data analysis and writing of the manuscript. He actively participated in revising the manuscript.

A M Rumayan Hasan: He managed overall data collection and analysis. He helped in writing the manuscript.

Samira Dishti Irfan: She was involved in the literature review, analysis of data and writing the manuscript.

Lily Ming-Sha Horng: She performed as the student investigator, wrote the protocol and participated in writing the manuscript.

Ezazul Islam Chowdhury: He worked as the Co-Investigator of the project. He supervised overall data collection, data analysis and writing of the manuscript.

Tasnim Azim: She worked as the Co-PI of this project. Reviewed the protocol and the manuscript, provided valuable suggestions for the overall improvement of the article.

Appendix A

Table A1
Socio-demographic features of the participants of the in-depth interviews.

Features	Kothi (n = 13)	Hijra (n = 10)	Panthe (n = 7)	Total (n = 30)
Age group				
18–25	8	5	3	16
26–35	4	3	3	10
36 +	1	2	1	4
Profession				
Hijra				
Sex workers	0	4	0	4
Badhai	0	2	0	2
Both badhai + sex worker	0	4	0	4
MSM (kothi and panthe)				
Sex worker	11	0	0	11
Transportation workers	0	0	3	3
Business	0	0	2	2
Day labourers	0	0	2	2
Students	1	0	0	1
Private service holders	1	0	0	1
Years of schooling				
0–5(primary)	3	5	4	12
6–10(secondary)	8	2	3	13
11 +	2	3	0	5
Marital status				
Unmarried (Never been Married)	9	10	5	24
Married	3	0	2	5
Divorced	1	0	0	1

References

- Amnesty International (2018). *Amnesty-international report 2017/2018, the state of the world's human rights* Washington DC, USA: Amnesty International.
- ASP (2017). *Behavioural and serological surveillance amongst key populations at risk of HIV in selected areas of Bangladesh*. IEDCR and icddr, b2016.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brink, H. I. L. (1993). Validity and reliability in qualitative research. *Curationis*, 16(2), 4–1993.
- Castro, R. (2016). *Exploring the impact of crystal methamphetamine usage and sexual activities have on gay men in recovery*. Doctor of Psychology in Human and Organizational Psychology Touro University.
- Chomchai, C., & Chomchai, S. (2015). Global patterns of methamphetamine use. *Current Opinion in Psychiatry*, 28(4), 269–274.
- Cohen, A. (2014). Crazy for Ya Ba: Methamphetamine use among northern Thai youth. *The International Journal of Drug Policy*, 25(4), 776–782.
- Darke, S., Kaye, S., Darke, S., Kaye, S., McKetin, R., Darke, S., Kaye, S., McKetin, R., Dufloy, J., Darke, S., Kaye, S., McKetin, R., & Dufloy, J. (2008). Major physical and psychological harms of methamphetamine use AU - Darke, Shane. *Drug and Alcohol Review*, 27(3), 253–262.
- Degenhardt, L., Baxter, A. J., Lee, Y. Y., Hall, W., Sara, G. E., Johns, N., Flaxman, A., Whiteford, H. A., & Vos, T. (2014). The global epidemiology and burden of psychostimulant dependence: Findings from the Global Burden of Disease Study 2010. *Drug and Alcohol Dependence*, 137, 36–47.
- Degenhardt, L., Mathers, B., Guarinieri, M., Panda, S., Phillips, B., Strathdee, S. A., Tyndall, M., Wiessing, L., Wodak, A., & Howard, J. (2010). Meth/amphetamine use and associated HIV: Implications for global policy and public health. *The International Journal of Drug Policy*, 21(5), 347–358.
- Degenhart, L., Stockings, E., Strang, J., Marsden, J., & Hall, W. D. (2015). *Illicit drug dependence disease control priorities third edition: Mental, neurological and substance use disorders* Washington DC, USA. International Bank for Reconstruction and Development3.
- DMPO (1976). 74. D. M. P. Ordinance. Dhaka, Bangladesh.
- DNC (2017). *Annual Drug Report - Bangladesh 2017*. Dhaka, Bangladesh, Department of Narcotics Control, Security Services Division, Ministry of Home Affairs. Government of People's Republic of Bangladesh.
- Ebert, R. (2012). *The examined life: Surveying moral beliefs in Bangladesh*. Retrieved 08/05/2019, 2019, from <https://opinion.bdnews24.com/2012/06/12/the-examined-life-surveying-moral-beliefs-in-bangladesh/>.
- Esposito, J. L. (2009). *The Oxford encyclopedia of the Islamic world*.
- Ezzy, D. (2013). *Qualitative analysis*. Taylor & Francis.
- GOB (2010). *Laws of Bangladesh, Act No. XXI of 1836 to Act No. I of 1872, chapter XVI of offences affecting the human body of offences affecting Life*. Retrieved 08/05/2019, 2019, from http://bdlaws.minlaw.gov.bd/pdf_part.php?act_name=&vol=I&id=11.

- GOB (2012). *The prevention and suppression of human trafficking act, 2012*. Dhaka, Bangladesh.
- GOB (2018). *The narcotic control act*. Dhaka, Bangladesh: Department of Narcotic Control.
- Gryczynski, J., Schwartz, R. P., Salkever, D. S., Mitchell, S. G., & Jaffe, J. H. (2011). Patterns in admission delays to outpatient methadone treatment in the United States. *Journal of Substance Abuse Treatment, 41*(4), 431–439.
- Guadamuz, T. E., & Boonmongkon, P. (2018). Ice parties among young men who have sex with men in Thailand: Pleasures, secrecy and risks. *The International Journal of Drug Policy, 55*, 249–255.
- Halkitis, P., Green, K., & Wilton, L. (2004). *Masculinity, body image, and sexual behavior in HIV-Seropositive gay men: A two-phase formative behavioral investigation using the internet*.
- Hittner, J. B. (2016). Meta-analysis of the association between methamphetamine use and high-risk sexual behavior among heterosexuals. *Psychology of Addictive Behaviors, 30*(2), 147.
- Hobkirk, A. L., Watt, M. H., Myers, B., Skinner, D., & Meade, C. S. (2016). A qualitative study of methamphetamine initiation in Cape Town, South Africa. *The International Journal of Drug Policy, 30*, 99–106.
- HRI (2018). *The global state of harm reduction*. London, UK: Harm Reduction International.
- Jalali, F., Hashemi, S., & Hasani, A. (2018). *The effectiveness of cognitive-behavioral group therapy in reducing craving among methamphetamine abusers living with HIV/AIDS*.
- Jerome, R. C., & Halkitis, P. N. (2009). Stigmatization, stress, and the search for belonging in black men who have sex with men who use methamphetamine. *The Journal of Black Psychology, 35*(3), 343–365.
- Kates, J., Wexler, A., & Lief, E. (2014). *Financing the response to HIV in low and middle-income Countries*. Menlo Park, CA: Kaiser Family Foundation.
- Khan, S. I., Hudson-Rodd, N., Siggers, S., Bhuiyan, M. I., Bhuiya, A., Karim, S. A., & Rauiyain, O. (2008). Phallus, performance and power: Crisis of masculinity. *Sexual & Relationship Therapy, 23*(1), 37–49.
- Khan, S. I., Hudson-Rodd, N., Siggers, S., & Bhuiya, A. (2005). Men who have sex with men's sexual relations with women in Bangladesh. *Culture, Health & Sexuality, 7*(2), 159–169.
- Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: a reconsideration and recent applications. *Harvard Review of Psychiatry, 4*(5), 231–244.
- Khosla, N. (2009). HIV/AIDS interventions in Bangladesh: What can application of a social exclusion framework tell us? *Journal of Health, Population, and Nutrition, 27*(4), 587–597.
- Kuo, C.-J., Liao, Y.-T., Chen, W. J., Tsai, S.-Y., Lin, S.-K., & Chen, C.-C. (2011). Causes of death of patients with methamphetamine dependence: A record-linkage study. *Drug and Alcohol Review, 30*(6), 621–628.
- Li, M. J., Okafor, C. N., Gorbach, P. M., & Shoptaw, S. (2018). Intersecting burdens: Homophobic victimization, unstable housing, and methamphetamine use in a cohort of men of color who have sex with men. *Drug and Alcohol Dependence, 192*, 179–185.
- Lim, S. H., Akbar, M., Wickersham, J. A., Kamarulzaman, A., & Altice, F. L. (2018). The management of methamphetamine use in sexual settings among men who have sex with men in Malaysia. *The International Journal of Drug Policy, 55*, 256–262.
- Liu, L., Chui, W. H., & Chai, X. (2018). A qualitative study of methamphetamine initiation among Chinese male users: Patterns and policy implications. *The International Journal of Drug Policy, 62*, 37–42.
- Lorvick, J., Bourgois, P., Wenger, L. D., Arreola, S. G., Lutnick, A., Wechsberg, W. M., et al. (2012). Sexual pleasure and sexual risk among women who use methamphetamine: A mixed methods study. *The International Journal of Drug Policy, 23*(5), 385–392.
- Maher, L., Phlong, P., Mooney-Somers, J., Keo, S., Stein, E., Couture, M. C., et al. (2011). Amphetamine-type stimulant use and HIV/STI risk behaviour among young female sex workers in Phnom Penh, Cambodia. *The International Journal of Drug Policy, 22*(3), 203–209.
- McKetin, R., Lubman, D. I., Baker, A., Dawe, S., Ross, J., Mattick, R. P., et al. (2018). *The relationship between methamphetamine use and heterosexual behaviour: Evidence from a prospective longitudinal study*. *Addiction*.
- Menza, T. W., Jameson, D. R., Hughes, J. P., Colfax, G. N., Shoptaw, S., & Golden, M. R. (2010). Contingency management to reduce methamphetamine use and sexual risk among men who have sex with men: A randomized controlled trial. *BMC Public Health, 10*(1), 774.
- NASP (2016). *National harm reduction strategy for drug use and HIV*. Dhaka, Bangladesh: National AIDS/STD Programme, DGHS, MOHFW.
- Nerlander, L. M., Hoots, B. E., Bradley, H., Broz, D., Thorson, A., Paz-Bailey, G., et al. (2018). HIV infection among MSM who inject methamphetamine in 8 US cities. *Drug and Alcohol Dependence, 190*, 216–223.
- Patton, M. Q. (2002). *Qualitative evaluation and research methods*. SAGE Publications Inc.
- Patton, M. Q. (2015). *Qualitative research and evaluation methods* (fourth edition). SAGE Publications Inc.
- Paulus, M. (2018). *Methamphetamine use disorder: Epidemiology, clinical manifestations, course, assessment, and diagnosis*. Wolters Kluwer R. Hermann.
- Piyaraj, P., van Griensven, F., Holtz, T. H., Mock, P. A., Varangrat, A., Wimonasate, W., Thienkruea, W., Tongtoyai, J., McNamara, A., & Chonwattana, W. (2018). The finding of casual sex partners on the internet, methamphetamine use for sexual pleasure, and incidence of HIV infection among men who have sex with men in Bangkok, Thailand: An observational cohort study. *The Lancet HIV*.
- Praptoraharjo, N. L. (2015). *Crystal-meth use and HIV-related risk behaviors in Indonesia*. Jakarta, Indonesia.
- Rahaman, M. (2014). *Drug trafficking in South Asia: A case study on Bangladesh*.
- Rigoni, R., Breeksema, J. J., & Woods, S. (2018). *Speed limits. Harm reduction for people who use stimulants*.
- Saldaña, J. (2015). *The coding manual for qualitative researchers*. Sage.
- Salo, R., Flower, K., Kielstein, A., Leamon, M. H., Nordahl, T. E., & Galloway, G. P. (2011). Psychiatric comorbidity in methamphetamine dependence. *Psychiatry Research, 186*(2), 356–361.
- Saw, Y. M., Saw, T. N., Chan, N., Cho, S. M., & Jimba, M. (2018). Gender-specific differences in high-risk sexual behaviors among methamphetamine users in Myanmar-China border city, Muse, Myanmar: who is at risk? *BMC Public Health, 18*(1), 209.
- Semple, S. J., Strathdee, S. A., Zians, J., & Patterson, T. L. (2012). Factors associated with experiences of stigma in a sample of HIV-positive, methamphetamine-using men who have sex with men. *Drug and Alcohol Dependence, 125*(1–2), 154–159.
- Sewell, J., Miltz, A., Lampe, F. C., Cambiano, V., Speakman, A., Phillips, A. N., Stuart, D., Gilson, R., Asboe, D., Nwokolo, N., Clarke, A., Collins, S., Hart, G., Eford, J., & Rodger, A. J. (2017). Poly drug use, chemsex drug use, and associations with sexual risk behaviour in HIV-negative men who have sex with men attending sexual health clinics. *The International Journal of Drug Policy, 43*, 33–43.
- Shoptaw, S., & Reback, C. J. (2007). Methamphetamine use and infectious disease-related behaviors in men who have sex with men: Implications for interventions. *Addiction, 102*(s1), 130–135.
- Talpur, A., & George, T. P. (2014). A review of drug policy in the Golden Crescent: Towards the development of more effective solutions. *Asian Journal of Psychiatry, 12*, 31–35.
- Tan, R. K. J., Wong, C. M., Mark, I., Chen, C., Chan, Y. Y., Ibrahim, M. A. B., Lim, O. Z., Chio, M. T.-W., Wong, C. S., & Chan, R. K. W. (2018). Chemsex among gay, bisexual, and other men who have sex with men in Singapore and the challenges ahead: A qualitative study. *The International Journal of Drug Policy, 61*, 31–37.
- UNODC (2018a). *Systematic literature review - risk and transmission of HIV, HCV & HBV among stimulant drug users: Review of the evidence* UNODC.
- UNODC (2018b). *World drug report - executive summary* Geneva, Switzerland: UNODC.
- Vosburgh, H. W., Mansergh, G., Sullivan, P. S., & Purcell, D. W. (2012). A review of the literature on event-level substance use and sexual risk behavior among men who have sex with men. *AIDS and Behavior, 16*(6), 1394–1410.
- Watt, M. H., Myers, B., Towe, S. L., & Meade, C. S. (2015). The mental health experiences and needs of methamphetamine users in Cape Town: A mixed methods study. *South African Medical Journal = Suid-Afrikaanse Tydskrif vir Geneeskunde, 105*(8), 685–688.
- WHO (2017). *Guidelines for the management of methamphetamine use disorders in Myanmar*. Naypidaw, Myanmar: World Health Organization.
- Wilkerson, J. M., Noor, S. W., Rhoton, J. M., Li, D., & Rosser, B. R. S. (2018). Differentially classified methamphetamine-using men who have sex with men: A latent class analysis. *Drug and Alcohol Dependence, 192*, 129–136.