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The Effects of Methamphetamine Use on the Sexual Lives of Gender and Sexually Diverse People in Dhaka, Bangladesh: A Qualitative Study

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Tasnim Azim: She served as the Co-Principal Investigator of this research project. She reviewed the protocol and manuscript, and provided valuable suggestions for the overall improvement of the article.

Disclosure of potential conflicts of interest

The authors declared that they have no conflict of interest.

Compliance with ethical standards

All interviews performed in this study have been conducted in accordance to the ethical standards of the Ethical Review Committee (ERC) of icddr,b. Moreover, this research protocol received the ethical approval of the ERC in icddr,b.

Informed consent

Informed and understood consents were attained and digitally recorded, if authorized by the participant, from all the study participants prior to conducting the interviews.

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Abstract

Methamphetamine use has increased among gender and sexually diverse people in several countries, including Bangladesh. This study aimed to explore the effects of methamphetamine on the sexual lives of these people in Dhaka, Bangladesh. An exploratory qualitative study was conducted, comprising 30 in-depth interviews with gender and sexually diverse people including males having sex with males (MSM), male sex workers (MSW), and transgender women *(hijra)* under HIV intervention coverage. 10 key-informant interviews were also conducted with individuals who have expertise in relevant disciplines such as drug use, harm reduction, and HIV and AIDS. Digitally recorded data were manually analyzed under the thematic analysis framework. Findings indicated that many participants reported that methamphetamine brought changes in their sexual lives such as increased sexual drive, engagement in group sex, the increased ability to perform serial sex, transactional sex, impulsive and coercive sex, initiation and switching of male-to-male sexual practices, and limited condom use. Key-informants noted that there is a dearth of methamphetamine-related services in Bangladesh. Methamphetamine use was found to lead to diverse effects on the sexual lives of gender and sexually diverse people, thus making it a driving force for shaping sexual practices and hence, sexual risks. Therefore, it is essential for policy-level stakeholders and program managers to consider the risks of methamphetamine use due to their negative ramifications on sexual health, including HIV risks.

Keywords

Methamphetamine; Gender and sexually diverse people; Sexual behaviors

INTRODUCTION

In several countries around the Globe, methamphetamine use has been increasing among gender and sexually diverse people, including men who have sex with men (MSM) and transgender women. This upward trend in methamphetamine use is also reflected in Asia and the Pacific. Gender and sexually diverse people use methamphetamine for a multitude of reasons such as bolstering sexual performance and pleasure, and enhancing sexual prowess (Guadamuz & Boonmongkon, 2018; Khan et al., 2019; Liu et al., 2018). To our knowledge, there is no evidence indicating that methamphetamine has been prescribed to gender and sexually diverse people to alleviate anxiety, depression, and other mental health ailments. Several studies have evinced that gender and sexually diverse people have used methamphetamine on their own accord to mitigate their emotional distress due to loneliness, marginalization, and stigmatization (Giorgetti et al., 2017; Khan et al., 2019; Lim et al., 2018; Wilkerson et al., 2018). In addition to acting as a social lubricant, methamphetamine also enhances sexual performance in various facets such as prolonging anal intercourse,

mitigating painful intercourse, and augmenting the ability to perform serial and group sex (Khan et al., 2019; Lim et al., 2018).

Methamphetamine use has a significant correlation with risky sexual behaviors which could lead to Human Immunodeficiency Virus (HIV) (WHO, 2011b), such as unprotected sexual intercourse, multiple concurrent sex partners, and transactional sex (Nerlander et al., 2018). This is because methamphetamine inflicts various short-term psychological changes, including euphoric feelings, decreased pain perception, and increased propensity to become more tactile and talkative (Bourne & Weatherburn, 2017; Rich et al., 2016; Wong et al., 2020). This risk was particularly pronounced among gender and sexually diverse people due to their engagement with HIV risk behaviors, specifically unprotected sex (Hermanstyne et al., 2019; Hotton et al., 2018; Wong et al., 2020).

In Bangladesh, a substantial proportion of MSM, male sex workers (MSW) and transgender women (locally known as *hijra*) use illicit drugs, not excepting methamphetamine (popularly known as Yaba) (ASP, 2017b). Yaba, a term for “crazy medicine” in Thai, is a form of methamphetamine that constitutes a mixture of caffeine and methamphetamine (Cohen, 2014). This form of methamphetamine is widely used in some countries in the Southeast Asian region (Guadamuz & Boonmongkon, 2018). Since Bangladesh is geographically situated at the epicenter of three vibrant drug production areas (i.e. the Golden Crescent of Pakistan, Afghanistan, and Iran, the Golden Wedge, and the Golden Triangle of Laos, Myanmar, and Thailand) (Rahaman, 2014; UNAIDS, 2018), Yaba and other illicit drugs are more readily available. A recent paper published by Khan et al. (2019) revealed that, in Bangladesh, MSM and *hijra* most commonly reported administering Yaba through the intranasal route, whereas no participants reported anal insertion or injection of the drug (Khan et al., 2019). Findings from a recent behavioral and serological surveillance in Bangladesh indicated that 16.8% of MSM, 11.9% of MSW, and 15.1% of *hijra* used illicit drugs. A further sub-analysis revealed that among this group, 79.5% of MSM, 73.6% of MSW, and 66.3% of *hijra* used Yaba within the past 12 months at the time of data collection (ASP, 2017b).

Although a sizeable proportion of the gender and sexually diverse people were found to take illicit drugs in Bangladesh, national HIV prevention programs towards gender and sexually diverse people currently lack the scope to tackle this issue. The crux of extant HIV prevention interventions for gender and sexually diverse people solely address the prevention of HIV via sexual routes. Similarly, the available interventions that address drug use only cater to People Who Inject Drugs (PWID). However, there is no evidence in Bangladesh indicating that gender and sexually diverse people injected methamphetamine (Khan et al., 2019). In addition, gender and sexually diverse people would not feel comfortable accessing drug-related interventions if they were not culturally sensitized towards their sexual practices (ASP, 2017a; Azim et al., 2009). Moreover, HIV prevention interventions in Bangladesh and other countries often function as a separate entity that lacks the resources to tackle the needs of people outside the specific target group (UNODC, 2019). Therefore, gender and sexually diverse people who use Yaba remain underserved due to the paucity of holistic and comprehensive interventions targeting the complexities of their methamphetamine use.

Sexual activity under the influence of drugs is becoming a burgeoning public health concern worldwide. Yet, it is difficult for gender and sexually diverse people in many countries to access health services, due to criminalization and stigmatization of illicit male-to-male sex and drug use, both of which are legally punishable offenses under the Bangladesh Penal Code (Section 377) and the Narcotics Control Act of 2018, respectively (GOB, 2010; 2018). Alongside legal impediments, there are also unfavorable cultural implications of male-to-male sex and drug use. For instance, male-to-male sex is highly stigmatized since the predominantly Muslim community perceives it to be a sinful practice that is forbidden in Islam. People who use drugs are also socially marginalized because drug use is construed as a social taboo. Therefore, in Bangladesh, gender and sexually diverse people who use drugs are likely to experience additional layers of stigmatization, such as the denial of employment opportunities, refusal of healthcare services, and familial abandonment (Khan et al., 2009; 2019; Khosla, 2009). In light of these legal and cultural challenges, it is necessary to adopt tailored interventions that transcend the realm of conventional frameworks for HIV prevention.

There is ample research about the methamphetamine and its relationship with risky sexual behaviors. However, a recent systematic review by Bryant and colleagues (2018) claimed that previous research on methamphetamine was mostly limited to a few risky sexual behaviors such as unprotected sex, transactional sex, and multiple sex partners (McKetin et al., 2018; Piyaraj et al., 2018; Rajasingham et al., 2012; Vu et al., 2015). Therefore, this warrants a more in-depth and multifaceted analysis of the effects of methamphetamine on the sexual lives of gender and sexually diverse people. Most of the methamphetamine-related studies are quantitative, though there are also some qualitative studies exploring the underlying reasons and effects of methamphetamine on gender and sexually diverse people, especially MSM (Guadamuz & Boonmongkon, 2018; Lim et al., 2018). Although these studies highlighted the connections between methamphetamine use and risky sexual behaviors, they do not holistically explore and delineate the effects of methamphetamine on the dynamics of sexual lives, evolution in male-to-male sexual practices, and underlying reasons for limited condom use.

There is also a paucity of knowledge among health service providers, policymakers and other stakeholders about providing health services for people who use methamphetamine, thus making it more challenging to implement specialized services for these populations (Nerlander et al., 2018; UNODC, 2018). Further research initiatives are warranted to explore the sexual lives of these specific populations so that policy and program planners can consider the complexities of methamphetamine use and devise interventions accordingly in Bangladesh and other similar settings. In this context, the aim of this article is to explore and understand the effects of methamphetamine (Yaba) on the sexual lives of gender and sexually diverse people in Dhaka, Bangladesh.

METHOD

Study design and sampling

In this exploratory qualitative study, 30 in-depth interviews (IDIs) and 10 key informant interviews (KIIs) were conducted to understand the effects of methamphetamine on the

sexual lives of gender and sexually diverse people. The IDIs were conducted with gender and sexually diverse people, including MSM, MSW, and *hijra,* who were recruited via snowball sampling. We reached gender and sexually diverse people who use Yaba by seeking the assistance of their peers in that same network. In order to be eligible to participate, they must have been at least 18 years old at the time of the study and have used Yaba at least once within the six months preceding the data collection.

In the context of Bangladesh, transgender women (i.e. *hijra*) are dissimilar populations from MSM. According to the extant literature, *hijra* do not identify as male, unlike *kothi* and *panthi* MSM. We determined whether the participant was MSM or transgender based on the gender with which they comfortably identified themselves at the time of the interview, as well as their reported roles within the realms of their communities. According to the extant literature, *kothi* MSM are men who belong to a self-identified socio-sexual group that shares collective norms and a sense of community. Although they are unrecognizable in public settings, they cross-dress and sometimes even use makeup and wear feminine attire during community gatherings and when searching for prospective clients (Khan, Hudson, Rodd, Saggers, & Bhuiya, 2005). Whereas, *panthi* MSM define mixed groups of men who primarily identify as men but they have sexual relationships with *kothi* (Khan et al., 2005). *Panthi* can have sexual relations with any gendered person of their choice, ranging from men, women, and *hijra. Hijra* are transgender women unique to the Indian subcontinent who do not abide by either male or female gender roles. Rather, they constitute both masculine and feminine characteristics or oscillate between the two (Khan et al., 2009).

At the initial stages of data collection, we used a snowball sampling approach to select research participants since MSM and *hijra* who use Yaba exist within tightly-linked networks. We selected several initial seeds from the enlisted MSM and *hijra* of the selected DICs with the assistance of the DIC outreach staff. Thereafter, we selected MSM and *hijra* based on variations in age (18–25 years, 26–35 years, and above 36 years), sexual practices (i.e. *kothi, panthi,* and *hijra*) and marital status, by using the principle of maximum variation sampling (Patton 2015). This particular sampling approach allowed us to explore these variations across participants, while also identifying common behaviors and practices that prevailed across this diverse participant sample (Patton, 2015).

Data collection

This study was conducted exclusively in the capital city, Dhaka, in the catchment areas of four drop-in-centers (DICs). DICs are static service delivery points implemented by a local nongovernment organization (NGO), as part of the HIV prevention intervention of the Global Fund Project, under the supervision of International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b). In these DICs, MSM and *hijra* can uptake a variety of health services, behavior change communication-related information, and rest and recreational facilities. The study received ethical approval from the Ethical Review Committee of icddr,b.

IDIs were conducted on a total of nine MSM (both *panthi* and *kothi*), 11 MSW (MSM who engage in sex work), and 10 *hijra*, lasting for two hours, on average. Interviews were conducted in standard Bengali by a research team consisting of medical anthropologists, sociologists, and public health experts with extensive experience in the disciplines of drug

use, gender, health, and HIV and AIDS. They were also trained in qualitative data collection techniques and sensitized to work with gender and sexually diverse people and other key populations. 10 key informant interviews (KIIs) were also conducted with individuals who were purposively selected based on their knowledge and experience in the relevant areas. Some of these key-informants included experienced staff of drug treatment and rehabilitation centers, other healthcare providers of public and private facilities, researchers, healthcare policy planners, and experienced staff of DICs.

The interview guidelines consisted of four main domains: patterns of methamphetamine use, underlying reasons for using methamphetamine, sexual lives under the influence of methamphetamine, and their health needs and recommendations while accessing the available HIV prevention services. This paper primarily addresses the third domain, which aims to explore and understand the effects of methamphetamine on the sexual lives of the gender and sexually diverse people in Dhaka city, Bangladesh. Thus, the interview questions in this domain pertained to sexual activities performed after methamphetamine use, nature of sex partners, involvement in transactional sex, involvement in group and serial sex, condom use, etc. Open-ended interview guidelines were initially used, yet the flexible nature of qualitative research allowed for emerging issues to be incorporated where appropriate. During the IDIs, a series of initial questions within a semi-structured interview guideline was posed about the socio-demographic characteristics of the participants, such as their age, marital status, occupation, etc.

The researchers reimbursed the study participants' transport costs. In addition, the researchers also provided them with snacks and tea. Yet, for those who were interested to receive cash payments instead of refreshments, they were given some money. The reimbursement did not exceed a total of BDT 500 (USD 7.0), which is suitable for two hours' worth of time compensation in the local context, and in line with the standard ethical guidelines followed in icddr,b.

The researchers selected secluded and uninhabited venues for the interviews, such as DICs during off-days, parks, and participants' private residences. This helped instill a sense of comfort and the impression that they are in a private space, thus facilitating the exchange of sensitive information, and enhancing authenticity and credibility. Informed and understood consents were obtained and digitally recorded. In addition, three members of the MSM and *hijra* community were appointed as research guides to collect informal interview data from the gender and sexually diverse participants and interpret data from an emic perspective.

Data analysis

IDIs and KIIs were transcribed line-by-line in standard Bengali. Concurrently, detailed field diaries were maintained in order to document informal conversations and relevant observations of the participants' expressions and feelings during the interviews. None of the transcribed data necessitated English translation since all of the research team members were proficient in Bengali. Rather, the Bengali transcripts were analyzed by senior researchers, and only selected components were translated into English. Those sections were subsequently incorporated into the manuscript, while still retaining the meanings of local terminologies and dialects.

Under the leadership of the Principal Investigator (first author), the first five co-authors were involved in the manual data analysis of interview transcripts and field diaries under the framework of thematic data analysis. This analysis team followed the six steps of thematic analysis that were initially proposed by Braun and Clarke (Braun & Clarke, 2006). Initially, the analysis team familiarized themselves with data from a subset of interviews by repeatedly and thoroughly perusing the interview transcripts and field diaries. These readings allowed the researchers to develop initial codes and collate the relevant data accordingly. For this, a codebook was used. In this process, the research team clearly defined the codes, i.e. specifying explicit guidelines in terms of how the text would be analyzed. Three researchers were independently involved in the coding process. To ensure that the application of codes was accurate, the researchers regularly met in review meetings, deliberated about the codes, and discussed any agreements and disagreements. In an effort to enhance inter-coder reliability, the codes were cross-checked. This iterative process ensures until all the data has been coded in a manner that has satisfied all the members of the research team. When the coders could not reach an agreement on a specific code, they consulted the Principal Investigator. In order to ensure that the researchers were consistently in agreement with the code application process, decision trails were maintained (Saldana 2015).

Afterward, the research team searched for important sub-themes pertaining to the effects of taking Yaba. These sub-themes were eventually collapsed with other sub-themes in order to constitute a broader theme. A thematic analysis matrix was eventually developed based on these themes. Each theme was then assigned a name and its scope was clearly defined. Finally, these themes were embedded in the manuscript (Braun & Clarke, 2006). In true qualitative fashion, data analysis concurrently ensued during the ongoing data collection process, until a point of data saturation was reached. No software was used during this data analysis process.

The data analysis process encompassed triangulation, peer-debriefing, and member-checking. To minimize personal bias and strengthen the trustworthiness of the data, the research team attempted to triangulate the data through utilizing multiple data sources, data collection techniques, theoretical perspectives, and analytical methods (Brink, 1993; Patton, 2015). The research team also regularly met in peer-debriefing sessions to discuss critical findings, identify gaps and enrich data interpretation (Ezzy, 2013).

In most cases, during the member checking sessions, the study participants concurred with the data. In a few cases, they offered their feedback and additional interpretative insights on some themes. In this way, the researchers cross-checked their analytical findings with the participants in order to ascertain an emic interpretation of the findings (Ezzy, 2013) which ultimately helped the researchers arrive at a consensus about the codes and themes, which were finally incorporated in the analysis and report.

RESULTS

IDI participants were from diverse socio-demographic backgrounds and characterized by various socio-sexual practices. The participants comprised of masculine MSM (i.e. *panthi*),

feminized MSM (i.e. *kothi*), and *hijra.* According to Table 1, over half of the participants were between 18–25 years of age. The majority of the *kothi* and *hijra* participants were engaged in sex work. However, a few *hijra* also reported concurrently engaging in selling sex and traditional *hijra* work which entails collecting money from stores and blessing new-borns (*badhai*). On the other hand, *panthi* participants were mostly involved in transportation work. Barring two *panthi* and one *kothi,* all the participants were married. Most participants merely received primary education.

According to the participants, initiating Yaba expanded their sexual networks and predisposed them to practice group and serial sex. Moreover, after using Yaba, several participants commenced sex work in order to finance their Yaba intake, as well as fulfill their amplified sexual urges. The enhanced sexual desires associated with taking Yaba also led to participants coercing others to have sex with them. Yaba use was also found to initiate and change male-to-male sexual practices and diminish condom use. Furthermore, the gender and sexually diverse people and key-informants, alike, discussed the limitations of the current services, in terms of tackling Yaba use for gender and sexually diverse people.

Yaba leads to increased sexual drive

Participants reported that Yaba engendered amplified sexual desires, thus influencing their sexual behaviors in several dimensions. For instance, because they took Yaba, they had the drive and energy to engage with multiple sex partners. Specifically, a formerly monogamous *panthi* participant started partaking in relations with *hijra, kothi* and female sex workers (FSW) after initiating Yaba. He explained that:

> "When I started taking Yaba (*baba*) my permanent partner (a *hijra*) did not like it because I needed to have a second round of sex, but could not convince her to have sex with me again. So I needed to go somewhere else to satisfy my desires. Now I have affairs with other *kothi* and *hijra*, which my partner has no clue about" (*Panthi*, IDI).

Similarly, another *hijra* participant who craved multiple sexual encounters explained that "I call my partner after using Yaba. If he (my partner) cannot come to my place, I invite other people. After taking Yaba, I feel the urgent need for sex, so I continue looking for other partners" (*Hijra,* IDI). Another participant reported that he started having sexual encounters with strangers solely to fulfill sexual urges. He described how Yaba increased his propensity to have sex with multiple partners in the following way:

> "I want to have sex after taking Yaba, usually with someone I know. However, if I do not find someone, I feel so desperate for sex that I go out and stand on the roadside, trying to convince *panthi* to have sex with me. This is how I started knowing many persons having similar sexual preferences and we enjoyed sex together" (*Kothi*, IDI).

Most participants maintained social groups, which were originally formed because of Yaba. This allowed them to meet new people, and sometimes even sexual partners. One *kothi* participant said:

> "I started taking Yaba with my friend, and then he introduced me to his other friends who use drugs. I made friends with them for the sake of sharing drugs. I depended on them because I often could not manage my own drugs. However, since Yaba creates more intense sexual urges, some of them became my sex partners" (*Kothi,* IDI).

Likewise, one *hijra* participant described how her group and subsequent sexual partners originated:

> "Each day, more and more drug users come to my slum to take Yaba (*chudda*), since they consider it a safe spot to take drugs. Local people and police are less likely to be suspicious about our activities. I also have sex acts with those drug users. Without Yaba, this group would not have formed" (*Hijra,* IDI).

Yaba influences engagement in group sex

A few *kothi* and *hijra* sex worker participants explained that Yaba fuelled their inclination towards group sex, i.e. simultaneously having sex with more than one partner (at least 2–3) in a single sexual encounter. Apart from that, a *panthi* participant claimed he could concurrently satisfy multiple *kothis* because of Yaba. Likewise, a *hijra* participant reported taking Yaba to improve group sex performance in the following manner:

> "It is child's play to have sex with 4–5 partners if you have Yaba. Once, after I took Yaba I was having oral sex, anal sex, and also helping two other people masturbate, all at the same time. Without Yaba, it would not have been possible to have sex in this way, whereas Yaba gave me so much strength that I can do anything clients ask from me. It feels like a porn movie" (*Hijra*, IDI).

In addition, a few *kothi* reported that they would orchestrate social gatherings on the weekend, which involved fun activities, music, and food. In these parties, the *kothis* would also bring Yaba. Because they were immersed in their own enjoyment of the social gathering, their conversations would eventually morph into group sexual encounters. In this context, they would partake in group sex, which was mostly performed without a condom. As one of the *kothi* reported:

> "We have sometimes a weekend party on Friday evening where we gather with our male active partners (*panthi*) to enjoy the day (*masty*). There are some special arrangements in those days e.g., some bring Yaba (*Baba*), some bring fruits and some bring scented rice (*biriani*). Sometimes, we dance together with music. In such a party, we take Yaba and fruits, and then we chat together, at one stage, we engage in sexual interaction with each other in a group at the same time. We do not use condoms as with Yaba, we forgot everything, it was just endless enjoyment and enjoyment" (Kothi, IDI).

Yaba leads to serial sex

A few *hijra* participants who sell sex reported taking Yaba before having serial sex, i.e. multiple consecutive sex encounters per night, involving not more than two people in the sexual act at a time. Some participants even reported taking in at least 8–10 *panthi* clients, one after another, with minimal break in between. They perceived that Yaba could increase

their sexual endurance, thus allowing them to entertain a long queue of clients while reducing the pain associated with prolonged anal sex. In many cases, the participants reported not using condoms when performing serial sex. To exemplify this, one *hijra* participant explained:

> "My *hijra* friend takes Yaba (*baba*) before selling sex. She prepares a temporary campsite beside the road with a cloth and a sleeping bag. She lies down and serves a line of clients. Her assistant sends in clients serially and manages the money. My friend starts at 11 pm and goes on until dawn (*ajan*). Yaba keeps her up the whole night. Yaba is a miracle" (*Hijra*, IDI).

Yaba as a stimulus for selling sex

Two participants claimed that they commenced sex work under the influence of Yaba through two mechanisms. The first mechanism was through engaging in sex work to sustain a steady cash flow to finance their Yaba intake. One of the *hijra* participants stated that:

> "Before Yaba (*chudda*), I could live on my traditional *hijra* work (*badhai*) but after taking Yaba I was struggling financially. Then, I started selling sex in order to manage money for Yaba. If I can manage the necessary money for buying Yaba, I do not sell sex that night" (*Hijra*, IDI).

Secondly, a few *hijra* and *kothi* participants described that after taking Yaba, they were not sexually satisfied with a single sexual encounter with a single sex partner. They claimed a single partner could not sufficiently fulfill their sex drive, hence they were encouraged to find more sex partners. A *hijra* participant explained more clearly:

> "My boyfriend (*parikh*) has sex with me once or twice per night, but that is not enough to satisfy me. After taking Yaba, I crave long-lasting sex and pleasure.
>
> When I feel this way, I search for more sex partners. This is how I started selling sex to meet my sexual demands" (*Hijra*, IDI).

Some *kothi* and *hijra* sex worker participants claimed that they often had sex with their clients in exchange for Yaba. While some of them were previously content with receiving just money, Yaba became their new preferred currency. One *kothi* participant echoed that he once had enjoyable sex with a client who offered him Yaba. After that, he would try to find clients who used Yaba. He would then immediately develop and maintain social and sexual networks with them, especially since these types of clients were difficult to find. Conversely, in one instance, a *panthi* participant explained that he found a *kothi* sex worker who helped facilitate his access to Yaba. In this specific endeavor, the *panthi* was able to attain Yaba and sex, although he paid for both.

Yaba possibly incurring violent sexual behaviors

Our study findings revealed that some of the MSM and *hijra* participants who were initially reported to not be sexually violent prior to the initiation of Yaba became more inclined towards performing violent behaviors after the intake of Yaba. Some of the participants reported that after the intake of Yaba, they coerced others into transactional sex until their satisfaction was fulfilled. For example, a *kothi* participant described that after taking Yaba,

he forced his sexual partner to have multiple rounds of intercourse with him, while also acknowledging that he never previously manifested these behaviors. He mentioned that:

> "After the first day of consuming Yaba, I felt the intense desire to have receptive anal sex. One day, I fought with my lover (*parikh*) because he penetrated me only once and ejaculated too quickly. After that, I wanted to have sex again and asked him for a second round but he refused. At that time, I was at my peak *(Amar sex mathai uthe geche)*, but he was not the least bit willing to have sex. Then I hit him. He could not understand what is going on, as I never behaved in such a way with him. Then I stripped him forcibly and then started having oral sex with him, followed by a second round" (*Kothi*, IDI).

Moreover, some of the participants alluded to being so desperate that they sometimes approached strangers for sex, including street youth. While some of those propositioned agreed, others did not and were emotionally coerced into sex. As a result, some of the participants reported threatening them if they did not comply with their demands. One of the *hijra* participants recounted the following instance:

> "When I am on Yaba, I always contact nearby *panthi* to have sex. If no one comes, I often wait on the streets in front of my house and try to coax other *panthi*. If he does not agree, I take him to my house by brute force. That very day, I dragged one of them into my room and told him to have (anal) sex with me (*amake lagao)* and he replied by saying that he does not have these types of sex. Then I told him that if he does not have sex with me then I will scream and tell other people that he came to have sex with me and escaped without paying. I threatened to trap him. In the end, I had oral sex with him. I behave this way after taking Yaba and have intense urges for sex" (*Hijra*, IDI).

In addition to emotionally blackmailing those who did not succumb to their demands, some of the participants reported inflicting sexual and physical violence as a means of exerting control. Through this mechanism, they were able to fulfil the sexual urges that were incurred by the intake of Yaba. As one of the *panthi* participants mentioned:

> "Yaba (*baba*) acts as a tonic. When I take Yaba, I behave like a ferocious animal, like a wild horse. Once I forced a *hijra* to have sex with me. First I proposed to have sex with her but she refused. I was adamant. I grabbed her, hit her arm, threw her on the bed and had sex with her" (*Panthi,* IDI).

Similarly, some of the DIC staff, such as the community-based outreach staff explained that the gender and sexually diverse people who used Yaba developed more heightened sexual urges, which they struggled to control. Therefore, this predisposed them to more impulsive and coercive behaviors, such as forcing their peers to have sex with them.

Yaba leads to changes in male-to-male sexual practices

A few *panthi* participants reported that prior to the initiation of Yaba, they were sometimes unable to get an erection (i.e., *ligam kharaina*). Some participants also reported their perceived inability to sustain their erection (i.e., *ligam kharai kintu ektu pore nuye pore ba dhila hoye jai*) because they claimed it would become flaccid before or after penetration.

After initiating Yaba, they reported that they had long-lasting erections during the first few years of Yaba intake. As a result, they became self-proclaimed "kings in bed" (*sex er belai raja).* However, after using Yaba for five or six years, they described that they developed an erection problem that stifled their ability to engage in penetrative anal sex. To optimize their perceived sexual experience and continue using Yaba in spite of their erectile problems, a few *panthi* participants claimed that they switched from the insertive (i.e. penetrative) to the receptive role. One *panthi* participant explained that his friend suggested this idea and he derived pleasure from his new receptive sex role. He kept on elaborating his sense of pleasure in the following manner:

> "I have been unable to penetrate for the past year so I started receiving penises. Now, I have become a *kothi* and other *panthi* are penetrating me. When they penetrate me, my penis gradually becomes erect, and it ejaculates afterwards, which gives me complete sexual pleasure. I also get anal sensations (*chinchinvaab)*, which feels good" (*Panthi*, IDI).

Conversely, a few *kothi* participants revealed that they switched from the receptive to the insertive role. In this particular situation, Yaba augmented their sexual desires to the extent that they did not derive satisfaction merely from being penetrated. A *kothi* participant explained:

> "After taking Yaba, I had sex with my *panthi* partner, but we were not satisfied. So then, for the first time, I penetrated my *panthi* who agreed to this, and both of us enjoyed this experience. This was only possible because of Yaba (*baba*)" (*Kothi,* IDI).

Yaba initiates male-to-male sex practices

After commencing Yaba intake, a few participants reported engaging in new types of sexual acts, such as male-to-male sex. For example, two friends consumed Yaba and felt strong sexual urges, but were unable to find female sex partners. Therefore, they masturbated first and subsequently, had anal sex with each other. A few *panthi* participants described diversified sexual experiences, which they have not expressed interest prior to initiating Yaba. For example, they never particularly wanted oral sex from their female partners before. Yet, after taking Yaba, they wanted to engage in oral sex, but their female partners refused. Therefore, they started having sex with *kothi* and *hijra* in order to satisfy these new sexual urges. A *panthi* participant reported such an instance as follows:

> "When I first took Yaba, I kept on wanting to have sex with my wife multiple times, but she found it so painful that she begged me to finish quickly … although I still had lingering urges. I did not tell her that though, so I went searching for a partner in the park. Finally, a *hijra* wearing a female dress (*saree*) agreed. I did not care what kind of sex it was or who I was having sex with; I just wanted to ejaculate in order to gain more pleasure. I ended up having anal sex with the *hijra*" (*Panthi*, IDI).

Another *panthi* participant rationalized his conversion as follows:

> "Having sex with female sex workers is boring, plus they are in a hurry to leave because they want to entertain more clients. So I was looking for someone with whom I can have sex according to my desires. So I started having male-to-male sex, following one of my friend's footsteps. Now I enjoy sex with males more than females" (*Panthi*, IDI).

Yaba diminishes condom use

Nearly all participants reported little to no condom use under the influence of Yaba. The majority of participants reported never using condoms while taking Yaba, with some noting that their intensified sexual desires superseded their ability to remember wearing condoms. For example, a *hijra* participant described that "whenever I take Yaba before sex, my sexual desire increases very quickly, and I become restless to start having sex, and I often forget to wear condoms" (*Hijra*, IDI). After taking Yaba, participants felt the urgency to gratify their "burning" sexual desires. A *kothi* participant explained that:

> "After taking Yaba, I become excited, my body heats up, and I constantly think about when I will be able to have sex. I know condoms are available under the bed, but my urges are so intense that it feels like searching for condoms is a waste of time" (*Kothi,* IDI).

Few participants reported that Yaba clouded their decision-making abilities and judgment. Although they knew that unprotected sex could place them at risk of acquiring sexually transmitted infections (STIs), their immense euphoric feelings overruled their will to use condoms. One of the participants explained:

> "After taking Yaba, my urge for sex increased, and I could not use a condom even though I had one with me at that moment. However, I can use a condom while having sex when I do not take Yaba. I know this drug is messing me up and putting me in danger" (*Kothi,* IDI).

Another *kothi* participant expressed that "I heard Yaba has a bad effect on memory. In this situation, I cannot even imagine the thought of using condoms. My sense, memory, and wisdom do not work. Therefore, whenever I have sex, using a condom does not even cross my mind" (*Kothi,* IDI).

Some participants stated they took Yaba to maximize sexual pleasure, and condoms were perceived as an obstacle. Before using Yaba, a few *panthi* participants reported using condoms to delay ejaculation. However, they achieved the same effect after taking Yaba. Therefore, they deemed condoms as an unnecessary hindrance to pleasurable intercourse. A *panthi* participant described that:

> "While on Yaba, it takes a long time to ejaculate. If I use a condom, sex will take even longer, sometimes more than an hour. I get bored, and my partner does not want to have sex for that long. So, I feel like I shouldn't use a condom" (*Panthi*, IDI).

A *kothi* participant substantiated the above explanation, claiming that he would prefer that his *panthi* refrain from condoms because sex was becoming long-winded and exhausting. A few *kothi* and *hijra* sex worker participants endured anal pain during prolonged sexual

intercourse because the lubricant in the condom was drying up, therefore they gave up on using condoms. In addition, some participants lost interest in condoms because of constant breakage.

As one of the *hijra* participants stated:

> "Because of Yaba, my *panthi* had sex for a long time, and the condom became hot and dry because the lubrication dried up, despite using extra lubricants. I felt a lot of pain and lost interest in sex, so I did not allow my *panthi* to have sex with me while using condoms" (*Hijra*, IDI).

These examples demonstrate that when using Yaba, participants abandoned their habits of condom use. A few key-informants corroborated this phenomenon, claiming that since Yaba clouded gender and sexually diverse people's decision-making abilities and memory, they were less inclined to use condoms, even if they normally use condoms while having sex with their partners.

Current scenario of existing services

Key-informants noted that there are currently no dedicated rehabilitative services for people who use Yaba in Bangladesh, including gender and sexually diverse people. HIV intervention services are currently provided to MSM and *hijra*, yet there are no specialized drug treatment provisions for Yaba. Each DIC has one general counselor, yet most of their academic credentials are not related to psychology or counseling. They received training about psychosexual, STI/HIV, and HIV testing-related issues but possess no knowledge of Yaba and its associated issues and complexities. Therefore, they are not equipped to discuss Yaba with gender and sexually diverse people who are enrolled in their program. Instead, they circumvent the topic in order to avoid dealing with the complexities. In some DICs, staff did not want to see MSM and *hijra* who use Yaba in the DIC premises because "they are difficult to handle and they steal things from the DIC so that they can buy Yaba" (DIC staff, KII).

Conversely, several participants who use methamphetamine perceived that they did not have a specific service delivery point that could address their unmet health needs. For example, they reported that they are often marginalized and excluded when they visit the DIC by their peers who do not use methamphetamine. Similarly, they reported that they would not feel comfortable availing healthcare from the harm reduction interventions out of anticipatory fear that they would be excluded because the traditional harm reduction interventions are targeted to PWID of whom most may not be involved in male-to-male sex. Hence, on both ends, they are on the social margin even within their community, thus leaving the DIC with unmet health needs.

The staff members of the MSM and *hijra* DICs opined that they require separate settings for those who use Yaba in order to accommodate their specific ailments, while also considering the comfort of other gender and sexually diverse people who may not want to see them in the DIC. However, DIC staff members posited that due to resource limitations, it might not be possible to introduce separate services for those who use Yaba. They also recommended that DIC staff could be trained on issues relating to the risk of Yaba use so that they can at

least handle rudimentary issues. Some DIC managers suggested devising awareness programs with DIC staff and programmatic experts so that they can identify MSM and *hijra* community members who use Yaba and convey awareness to them about the deleterious effects of Yaba use. This awareness-raising initiative can also dispel DIC staff members' prejudices and preconceived notions towards people who use Yaba.

A few key-informants, mainly psychiatrists and counselors who are well-versed about the drug use culture in Bangladesh, claimed that people who use Yaba for a long time might suffer from mental health problems. They also noted that there is no national guideline or protocol for people who use Yaba.

DISCUSSION

The effect of methamphetamine on the sexual behaviors of MSM have been widely researched in various parts of the Globe, there is limited research on this phenomenon in the South Asian region, particularly from a qualitative lens. Moreover, there is a paucity of research about the effects of methamphetamine on transgender women. This study is also one of the few to present the effects of methamphetamine from a qualitative lens in a country where gender and sexually diverse people who use drugs are heavily marginalized on socio-legal and religious grounds. As the sub-culture of gender and sexually diverse people is unique in the Indian subcontinent, these findings depict insights from the perspective of an elusive yet tightly-linked community with their own realm of socio-sexual conventions. These insights would eventually help redesign culturally sensitive interventions not only in Bangladesh but also on a global scale.

Study findings revealed that methamphetamine engendered profound changes in sexual behaviors and practices among MSM and *hijra,* such as having multiple sex partners to fulfil amplified sexual urges. Several studies on heterosexual participants and gender and sexually diverse participants, alike, substantiated this finding, indicating that methamphetamine enhanced their ability to have painless sex with multiple partners (Hoenigl et al., 2016; McKetin et al., 2018; Melendez-Torres et al., 2016; Pantalone et al., 2014). In addition, the current study indicated that methamphetamine provided participants with the endurance to perform serial sexual events, sometimes even with non-marital partners. Similarly, several studies highlighted gender and sexually diverse people's abilities to withstand serial sex, due to decreased anal pain during intercourse (Isaiah Green & Halkitis, 2006; Halkitis et al., 2001). Moreover, findings from Guadamaz and Boonmongkon's study revealed that group sex is also commonly practiced in "ice parties" in Thailand, which are exclusive secret social and sexual gatherings where methamphetamine is exchanged (Guadamuz & Boonmongkon, 2018). However, this current study also alluded to the relationship between intensified sexual pleasures and group/serial sex.

A few participants of the current study also reported selling sex after initiating methamphetamine use, either to sustain funds for purchasing methamphetamine or to meet unrequited sexual desires. Similarly, a quantitative study conducted in Thailand highlighted the same trend among MSM (Piyaraj et al., 2018). Likewise, a longitudinal study conducted in Vancouver identified the transaction of drugs in exchange for sex as a correlate of

methamphetamine use (Colyer et al., 2018). Although many studies acknowledged that methamphetamine use evoked increased sexual desires (Liu & Chai, 2018; Shakeri et al., 2015; Vearrier et al., 2012), no other study was found to pinpoint this increased desire as an underlying reason for initiating sex work, particularly to sustain funds for taking drugs. This finding is particularly critical because sex work can propagate risky sexual behaviors with an increased likelihood of HIV transmission.

Some of the study participants reported transactional sex in exchange for methamphetamine. Moreover, the current study participants reported setting up secret social gatherings where they exchanged methamphetamine, which eventually also created a platform for sexual relations. Guadamaz and Boonmongkon (Guadamuz & Boonmongkon, 2018) also reflected this dynamic in the “ice parties” study in Thailand.

Moreover, this current study revealed that methamphetamine intake made participants blackmail, threaten and rape strangers if they did not comply with their sexual demands. As evidenced by the literature, methamphetamine use can influence cognitive reasoning, thus clouding decision-making and predisposing individuals to more aggressive and sexualized behaviors, not excepting sexual violence (Brecht et al., 2013; McKetin et al., 2014). In addition to our study, Guadamuz and Bonmoogkon’s study indicated that MSM who attended the “ice parties” often participated in impulsive, coercive and violent behaviors, such as rape and forced unsafe sex (Guadamuz & Boonmongkon, 2018). Likewise, a few other recent studies underscored the relationship between methamphetamine use and sexual violence (Miller et al., 2019; Maiorana et al., 2019). These aforementioned practices are particularly alarming as it could exacerbate HIV risk behaviors.

Some *panthi* participants who have used methamphetamine for a long period struggled to sustain erections, which mirrors findings from gay and bisexual participants in USA-based studies (Bang-Ping, 2009; Shoptaw & Reback, 2007). In turn, these *panthi* changed their role, from insertive to receptive, to satisfy sexual urges and maximize sexual pleasure. Withfield’s (1996) study highlighted a similar phenomenon called “crystal dick,” the inability to get an erection while using crystal methamphetamine, thus compelling gay men to alternate between insertive and receptive anal intercourse roles (Isaiah Green & Halkitis, 2006); the same phenomenon was reflected in Thailand’s study about “ice parties” (Guadamuz & Boonmongkon, 2018). Conversely, our study found that *kothi* also switched from the receptive to the insertive role, which was also corroborated by the abovementioned studies that were conducted in the USA and Thailand, respectively. However, this current study also delved into the reasons for this switch from the receptive to the insertive role, which was not delineated from the emic perspective elsewhere. Many of the current study’s participants reported yearning to explore new sexual activities such as male-to-male sex, which may not have occurred without methamphetamine use. However, this was yet to be found in other studies.

In terms of methamphetamine catalyzing inconsistent to no condom use, the current study findings coalesce with those of other studies (Colyer et al., 2018; Feelemyer et al., 2018; McKetin et al., 2018; Nakamura et al., 2011; Piyaraj, et al., 2018). Participants in the current study opined that condom use led to anal discomfort while having prolonged sex due to

insufficient lubricant. This issue was also reflected in other studies (Semple et al., 2002; 2012). Other participants from the current study also explained that condoms were no longer assistive in sex since methamphetamine use replaced their role in delaying ejaculation, which was yet to be found in other studies.

The study findings also indicated that the health service providers of the current HIV prevention interventions and key-informants from the drug treatment centers concurred that existing harm reduction services for both the MSM and PWID, are not wholly tailored to meet the needs of gender and sexually diverse people who use methamphetamine. However, to our knowledge, there is no other study based in Low and Middle-Income Countries (LMICs) discussing the challenges of providing specialized services to gender and sexually diverse people who use illicit non-injection drugs, specifically methamphetamine.

Public health research has pinpointed links between methamphetamine use and risky sexual practices. However, experts in the discipline of methamphetamine research have claimed that this link is primarily based on generalized assumptions about stimulant drugs exacerbating sexual risk behaviors (Bryant et al., 2018). Most of this research embodied biomedical knowledge production initiatives (Bourne et al., 2015; Degenhardt et al., 2016; Weatherburn et al., 2017). It is important to acknowledge that several studies highlight a strong association between the use of methamphetamine, risky sexual practices, and poor health outcomes. Yet, due to the bi-directionality of the established relationship, the nature of the link is somewhat obscured. Therefore, the qualitative design of this research allowed for the exploration of findings from the participants' voices and perspectives. In turn, this generated findings that were not based on assumptions but rather, the voices of the gender and sexually diverse people that were derived from their cultural norms, values, belief systems and perspectives of what are considered appropriate sexual practices.

Support services, methamphetamine, and sexual behaviors: Implications of this research

There are a few exemplars of harm reduction approaches tailored towards gender and sexually diverse people in some parts of the world. In Australia, for example, there is a peer support group intervention designed for gender and sexually diverse people who use methamphetamine (Burgess et al., 2018). Moreover, in a randomized controlled trial conducted in Los Angeles, it was found that a combined approach constituting cognitive behavioral therapy and contingency management led to significant reductions in methamphetamine use (Shoptaw et al., 2007). The majority of the countries in the Asia-Pacific region have adopted the harm reduction approach yet they are targeted towards people who use opiate-based drugs (WHO, 2011c). There is currently a dearth of an in-depth understanding of methamphetamine on the sexual lives of gender and sexually diverse people. In the existing HIV/sexual health service programs, issues and complexities relating to methamphetamine use are rarely understood or emphasized in most of the countries (WHO, 2011a). In addition, within the conventional harm reduction framework, there is a paucity of services tailored towards addressing the harms associated with methamphetamine and other similar drugs, more so for gender and sexually diverse people. As findings of this research have provided useful insights about the effects of methamphetamine on sexual behaviors of the gender and sexually diverse people, these insights could be incorporated

into the conventional HIV and sexual health interventions, both nationally and globally. In addition, the harm reduction interventions for people who use drugs could accommodate issues relating to methamphetamine use, particularly its implications on sexual behaviors and risks.

Study limitations

Due to the hidden and stigmatized nature of this group of gender and sexually diverse people who use methamphetamine, this research adopted a non-probabilistic sampling approach. However, this approach easily lends itself to selection bias. However, the research team tried to lessen this bias through maximum variation sampling. Furthermore, as male-to-male sex and drug use are highly sensitive issues, there remains scope for self-reporting bias. Although, the research team attempted to minimize this bias by appointing research guides from the same community who participated in the study. Because of the qualitative nature of this research, the findings cannot be generalized, rather they have contextualized the implications of methamphetamine use among gender and sexually diverse people.

Areas for future research

As this research was focused on the sexual effects of methamphetamine, there was no scope to explore the effects of methamphetamine on physical and mental health even though these aspects are crucial for re-designing holistic interventions to address the harms of illicit drug use among gender and sexually diverse people. Although this study focused on gender and sexually diverse people, the effects of methamphetamine on sexual lives may also apply to other population groups, mainly because of methamphetamine's strong influence on sexual drive and decision-making. Recent Bangladeshi newspaper reports state that many of these perpetrators of sexual violence, young and adult men alike, used methamphetamine (Prothom-Alo, 2019; Thompson, 2017). Thus, the effects of methamphetamine on sexual practices need to be further studied in the context of sexual abuse and violence, including all genders and ages. Therefore, future research initiatives could also explore the effects of methamphetamine on other populations.

CONCLUSION

The study findings revealed that methamphetamine use is linked with diverse effects on the sexual lives of gender and sexually diverse people. In essence, methamphetamine was found to influence sexual behaviors and practices in various ways such as engagement with multiple sex partners, inclination towards coercive sex and involvement in transactional sex. In particular, this study evoked some new and unique insights about the influences of methamphetamine such as engagement in transactional sex to fulfill unrequited sexual desires and reasons for initiating and changing male-to-male sexual practices among MSM. Therefore, in this context, methamphetamine has changed the dynamics of sexual practices, albeit in a riskier direction.

It is essential for harm reduction and HIV/sexual health interventions to consider the sexual health-related implications of methamphetamine use. Otherwise, methamphetamine may jeopardize the impact of safer sex promotion efforts targeted towards gender and sexually

diverse people. Therefore, the findings of this study warrant appropriate and context-specific targeted public health intervention services to be implemented for gender and sexually diverse people as they use methamphetamine in Bangladesh and elsewhere.

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APPENDIX

Table 1:

Socio-demographic characteristics of participants of in-depth interviews

Particulars	Feminine MSM (*Kothi*) N=13	Masculine MSM (*Panthi*) N=7	Transgender women (*Hijra*) N=10	Total N=30
18–25 (n, %)	8, 61.5	3, 42.9	5, 50.0	16, 53.3
26–35 (n, %)	4, 30.8	3, 42.9	3, 30.0	10, 33.3
36+ (n, %)	1, 7.7	1, 14.3	2, 20.0	4, 13.3
Years of education				
0 – 5 (Primary) (n, %)	3, 23.1	4, 57.1	5, 50.0	12, 40.0
6 – 10 (Secondary) (n, %)	8, 61.5	3, 42.9	2, 20.0	13, 43.3
11+ (n, %)	2, 15.4	0, 0	3, 30.0	5, 16.7
Marital status				
Unmarried (n, %)	9, 69.2	5, 71.4	10, 100.0	24, 80.0
Married (n, %)	3, 23.1	2, 28.6	0	5, 16.7
Divorced (n, %)	1, 7.7	0, 0	0	1, 3.3
Main sources of income				
Sex workers (n, %)	11, 84.6	0	4, 40.0	15, 50.0
Traditional occupation of *hijra* (Badhai) (n, %)	0	0	2, 20.0	2, 6.7
Traditional occupation of *hijra* (Badhai) and sex worker (n, %)	0	0	4, 40.0	4, 13.3
Transport worker (n, %)	0	3, 42.9	0	3, 10.0
Business (n, %)	0	2, 28.6	0	2, 6.7
Day laborers (n, %)	0	2, 28.6	0	2, 6.7
Students (n, %)	1, 7.7	0	0	1, 3.3
Private service holder (n, %)	1, 7.7	0	0	1, 3.3

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