

**STUDY REPORT**

# **CRYSTAL-METH USE AND HIV-RELATED RISK BEHAVIORS IN INDONESIA**

December 2015

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**Crystal-meth Use and HIV-related Risk Behaviors in Indonesia**

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Submitted to Mainline – The Netherland  
This work was funded by Mainline – The Netherlands  
In collaborative agreement number 15.10.05.MLN.029

December 2015



## EXECUTIVE SUMMARY

HIV risk behaviors among crystal-meth users might contribute to increasing HIV prevalence rates in Indonesia. Related risks can be reduced if people have access to crystal-meth related health services. Prior to the development of interventions, a comprehensive understanding of structural, social, interpersonal and personal factors related to the use of crystal-meth in Indonesia is crucial. This includes a better understanding of individual and environment factors surrounding drug use and HIV-related risk behaviors, which will allow for the designing of better interventions. This study aims to gain better knowledge on patterns of meth use and its implications on HIV risk and health seeking behavior among crystal-meth users in Indonesia, including a better understanding of on individual and environmental factors shaping drug use.

A qualitative research design was developed with the aim of producing a deeper understanding of the diverse patterns of meth use and its implications for HIV risk and related health seeking behaviors. The study looked at patterns of initiation of meth use, sustained use and attempts of reducing and stopping the use of the drug, and how the drug use influenced users' behaviors, including daily activities, HIV risk behaviors, exposure to legal problems, as well as users' social and sexual networks and health seeking behaviors.

It was found that patterns of meth use are dynamic and that its use is influenced by factors a personal, inter-personal and social level, occurring within a specific setting and situated within the informants' life experience. Initiation of meth use is strongly influenced by the social network during the informants' youth. Through the network information and or knowledge on the drug, its effects, and availability are provided. Moreover, various forms of assistance may also be provided by the network (e.g. borrowing of money, pawning things, pooling money, or providing drugs). Temporary cessation or relapse may also be influenced by a user's social network.

The study has identified three overlapping patterns of meth use: Frequent users, who use meth on a daily basis and tend to do so independently of their social network; practical users, who use meth on a regular basis, but not as frequent as the frequent users; and casual users, who use meth on a situational basis. Users may move from one using pattern to another, depending on specific events and their life situation.

Addiction is an important theme explored in this study. Most of the informants reported that the use of meth does not necessarily lead to addiction. As long as they perceived they could manage their use and were able to perform their daily routine, they did not consider themselves to be addicted. Informants tended to associate drug addiction with heroin use. This dominant perception seems to be rooted in the belief that rehabilitation or drug treatment is needed or indicated for heroin use only, and not for meth use, as meth use, according to most informants, can be controlled by the user. However, some informants stated that they were in need of psychological services to deal with depression, anxiety and stress, or required legal aid as a consequence the consequences of their meth use.

All informants of this study stated that they were sexually active and most of them had multiple sexual partners, either currently or in the past. Partner types consisted of regular partners, casual

partners and commercial partners. Overlapping social and sexual networks were common among female meth users. Unbalanced power relations between female meth users and their partners could be observed potentially leading to risky sexual behavior (no condom use).

Myths or misperception related to the health consequences of meth use and associated sexual risk behavior were common among informants and within their social networks, creating potential barriers to accessing health services. One of the reasons for this could be that there are no programs or services specifically targeted at meth users. The current national AIDS program only focus on people with injecting drug use (PWID) and no interventions or programs are targeted at meth users. Limited information on the one hand and the common perception among meth users that they do not have an addiction problem on the other hand lead to limited numbers of meth users, who have experience accessing health services or drug treatment.

This study comes forward with some recommendations to be taken into account when developing health policies and programs targeting meth users:

1. Outreach activities and intervention programs for meth users should be urgently developed due to the increasing number of meth users, as documented in the survey conducted by the NNB, as well as the findings reported in this study. The national AIDS program should include this population as a priority due to heightened sexual risk behaviors among meth users, including low perception of HIV risk, low frequency of condom use, and frequent multiple sex partners. Moreover, drug treatment services should be designed to meet the needs of meth users, especially for psychosocial services.
2. Intervention programs should take into account perceptions of addiction as expressed by the informants of this study. Varying perceptions of addiction as understood by health practitioners and meth users may lead to misguided interventions for meth users.
3. Life skills education aiming at preventing youth to engage in drug use in more generally, or meth use more specifically, should start at an early stage of education, as findings from this study indicate that initiation meth use frequently occurs is between the 6th and 7th grade. The importance of social networks (e.g. peers from school or within neighborhood) should be recognized in relation to drug use initiation patterns among youths and young adults.
4. Policy and program efforts specifically targeting drug use and sexual behavior among female meth users should be developed due to females heightened vulnerability within unbalanced power relationships with male meth users within social networks of meth users. Programs that fail to take into account power relations within sexual relationships between male and female meth users run the risk of leaving female meth users more prone to HIV risk.
5. To have a better understanding of the magnitude, distribution and patterns of meth use in Indonesia in order to help develop appropriate programs and interventions. Furthermore, it is imperative to conduct more studies, both qualitative and quantitative, in areas identified as harboring large numbers of meth users, such as Jakarta, Denpasar, Batam, Makassar and Medan.

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# SECTION 1: INTRODUCTION

## INTRODUCTION

Crystalline methamphetamine (crystal-meth) is an illicit drug, which is part of the amphetamine-type stimulants. In the brain, a primary action of methamphetamine is to elevate the levels of extracellular monoamine neurotransmitters (dopamine, serotonin, and norepinephrine) by promoting their release from the nerve endings (Rothman & Bauman, 2003). Typical acute behavioral effects of methamphetamine include feelings of alertness, wakefulness, energy, well-being, euphoria (at high doses) and suppression of appetite. Methamphetamine also activates the cardiovascular system (increased heart rate and blood pressure) and, at high doses, can even cause death (Karch, 2001). In Indonesia, crystal meth is widely known by its street name shabu or shabu-shabu.

Crystal-meth use has become an emerging issue in Indonesia. A recent national survey from the National Narcotic Board (NNB) in 2014 states that a third of an estimated 5 million drug users in Indonesia use crystal-meth. Thus, crystal meth is the second most commonly used drug in Indonesia after cannabis. According to the NNB survey, crystal-meth is especially prevalent among laborers and students. Although Jakarta is the province with the highest overall number of drug users in Indonesia, the survey points out that the provinces with the highest proportion of crystal-meth users during the past year were Riau Islands, South Sulawesi and Bali. At the same time, in 2013 arrests related to crystal-meth also escalated as compared to previous years. The NNB survey also highlights some interesting findings about shifting trends of how crystal-meth is being used. Injecting becomes the second most popular method after inhaling the substance, particularly among individuals who also use heroin. Injecting crystal-meth poses a potential risk for HIV transmission through unsafe injection practices.

An association between ATS use and an increased risk for HIV has been documented in several previous studies from different regions. The effects of amphetamine use may result in increased risk taking, such as unprotected sex, sex with many partners and lengthened sexual episodes (Colfax & Shoptaw, 2005). A study from South Africa for instance found a close association between meth use and sexual risk practices (Simbayi, et al, 2012). In addition, Couture and colleagues (2012) discovered in their study that ATS users had high levels of alcohol use and an increased risk of sexually transmitted infections. Moreover, various studies found that meth/amphetamine use is significantly associated with HIV infection among men who have sex with men (MSM) and sex worker populations (Vu, Maher & Zablotska, 2015; Couture et al, 2012; Ho, Le, Dihn, 2013).

These findings resonate with the situation in Indonesia, where methamphetamine use was found to be independently associated with a positive HIV status among urban MSM (Morineau et al, 2011). In addition, a recent case study showed that in Indonesia female sex workers are often requested by their clients to use ATS to improve sexual experience. This in turn can increase the likelihood of engaging in risky sexual behavior, which may lead to HIV transmission (Walk, 2014). Crystal-meth users are thus at a heightened risk of HIV infection, similar like other key population groups.

HIV risk behaviors among crystal-meth users might contribute to increasing HIV prevalence rates in Indonesia. Related risks can be reduced if people have access to crystal-meth related health services. Such services might include behavioral and pharmacotherapy interventions (Colfax et al, 2010). Prior to the development of interventions, a comprehensive understanding of structural, social, interpersonal and personal factors related to the use of crystal-meth in Indonesia is crucial. This includes a better understanding of individual and environment factors surrounding drug use and HIV-related risk behaviors, which will allow for the designing of better interventions. This study aims to gain better knowledge on patterns of meth use and its implications on HIV risk and health seeking behavior among crystal-meth users in Indonesia, including a better understanding of individual and environmental factors shaping drug use.

## RESEARCH QUESTION

What is the current situation of crystal-meth use in Indonesia and what are its implication to for HIV risk behaviors and health seeking behaviors among meth users?

Specific research questions are:

1. What are the demographic characteristics of meth users in Indonesia?
2. What are the dominant patterns of crystal-meth users among users in Indonesia?
3. What are types and forms of sexual and drug using networks exist among crystal-meth users who participate in this study?
4. What are the risk behaviors of the meth users study participants in relation to HIV transmission?

## OBJECTIVE

Based on the research questions, the purpose of the study is to provide a description of current patterns of crystal-meth use in Indonesia and its implications for HIV risk and health seeking behaviors among meth users. The specific objectives of the study include:

1. To identify characteristics of meth-users in Indonesia
2. To explore patterns of meth use in Indonesia
3. To explore types and forms of social and sexual networks among crystal-meth users in Indonesia;
4. To identify risk behaviors related to HIV transmission and health seeking behavior among crystal-meth users in Indonesia;
5. To develop an instruments for integrated behavioral and biological survey among meth users in Indonesia.

## SIGNIFICANCE OF THE STUDY

In the absence of an in-depth understanding of how crystal-meth users in Indonesia perceive their HIV-related risk behaviors, this study aims to provide a significant contribution towards the future development of crystal-meth interventions. The insights gained from this study can be utilized to inform the programmatic design of HIV prevention interventions among crystal-meth users. Furthermore, the findings from the initial mapping of sexual and social networks of meth users in this study are beneficial for the designing of the second phase of the study, which will be looking at HIV, HCV and STI prevalence rates among crystal-meth users.

## SECTION 2: METHODS

### DESIGN

A qualitative research design was developed to gain a deeper understanding of the diverse patterns of meth use and related implications for HIV risk and health seeking behaviors. The study looked at patterns of initiation of meth use, sustained use and attempts of reducing and stopping the use of the drug, and how the drug use influenced users' behaviors, including daily activities, HIV risk behaviors, exposure to legal problems, as well as users' social and sexual networks and health seeking behaviors. A qualitative research protocol had been developed, defining the purpose of the study, the study population, sampling strategy and the data collection and analysis approach. Furthermore, a standard interview guide for meth users had been developed, aiming at exploring patterns of initiation of meth use, sustained meth use and attempts of reducing and stopping its use, users' social and sexual networks, sexual behaviors, perceived risks of HIV infection, and experience of legal problems and drug treatment.

### LOCATION OF THE STUDY

Jakarta, Medan and Makassar were chosen as the sites of the study. The selection of these cities was based on the National Narcotic Board Report (2014) that showed these cities had the highest number of crystal-meth users in Indonesia. Moreover, the selection of the cities is also expected to provide a better picture of meth using patterns and other characteristics of meth users in different regions of Indonesia, as shown in figure 1.

*Figure 1: Study sites*



## DATA COLLECTION

Data collection was done using the peer nomination method, in which informants are asked to nominate peers (other meth users) to become potential new informants. The first informants had been chosen by a field contact from local drug user networks. The selection of the first contact had been determined based on age category (younger vs older); employment status (employed vs unemployed); and gender (male vs female). The interview guide was administered by a team of interviewers, who had been previously trained on research methodology and research ethics by the study investigators. Interviews were carried out at places considered to be safe by the informants. Some of the interviews were conducted at NGO field stations, and others were carried out at field contacts' homes. Inclusion criteria for participation in the study were a minimum of 18 years of age, active meth use within the last month, sexually activity within the last year, and staying in the selected cities during the last six months. A minimum of 12 informants were planned to be recruited in each city (total of 36), but the actual number of participants turned out to be 38 after data collection had been completed. The two additional informants in Jakarta were included in order to also have a man who has sex with men and a member of a higher economic class among the participants.

**Table 1. Number of Informants by location and gender**

Location	Male	Female	Transgender	Total
Jakarta	9	5	0	14
Medan	8	4	0	12
Makassar	5	6	1	12
<b>TOTAL</b>	<b>24</b>	<b>14</b>	<b>1</b>	<b>38</b>

## DATA ANALYSIS

All interviews were transcribed and checked for completeness and accuracy. Information referring to the real identity of the informants or any other person named during interviews was removed to protect confidentiality. A three-stage coding and analysis process was then conducted. First, all the interview transcripts were entered into Nvivo 10 to be coded based on agreed themes. Second, the data in each thematic area was reviewed to map patterns and trends. Further coding into subthemes was carried out where necessary. Third, the emerging patterns, trends and differences among and within the coded themes were identified and analyzed.

## RESEARCH ETHICS

In order to protect welfare, confidentiality and independency of the informants during the study, protocol of the study had been submitted to the Ethics Committee of Atma Jaya Catholic University to be reviewed. The committee granted the ethics clearance by issuing an approval letter with the number 1228/111/LPPM-PM.10.05/10/2015. During the data collection process, before the interviews were conducted, each informant was explained about the objectives of the research, how the research will protect information provided by informants, and the risks and benefits of participating in the research. Accordingly, each informant was asked to provide consent to participate in the study.

# SECTION 3: RESULTS

## DEMOGRAPHIC PROFILE OF CRYSTAL-METH USER IN THREE CITIES

A total of 38 informants from various demographic backgrounds, all current active crystal-meth users (at least once within past month), participated in the study. Ten of the study participants were young people aged 24 years or younger. The median age of study participants was 29 years old (IQR = 28). The length of meth use among informants varied between 4 months and 22 years, with an average length of 10.6 years. Roughly two thirds of informants reported that their last education attainment was senior high school (63%). Only 11 per cent had an undergraduate degree. More than half of the informants (55%) were employed at the time of the study. Most worked in the informal sector, as parking attendants, sex workers, domestic workers, security guards, small art business operators, or massage therapists. Those employed in the formal sector worked as chefs, hotel or club/entertainment staff, or were part time government workers. Some still depended financially on their parents, and the remaining few were in-between jobs. In terms of HIV status, three informants reported that they are HIV positive.

**Table 2. Demographic profile  
of the Study Participants  
(N=38)**

	Characteristic	Total
Sex		
	Male	22
	Female	15
	Transgender	1
Age		
	<24 years old	10
	>24 years old	28
Employment status		
	Employed	21
	Unemployed	9
	Housewife	3
	Sex worker	5
Educational background		
	Primary school	3
	Secondary school	7
	High school	24
	Undergraduate	4
Marital Status		
	Single	21
	Married	14
	Divorce	3
Income		
	< \$100	10
	\$101 - \$200	5
	\$201 - \$300	14
	\$301 - \$500	6
	> \$500	3

## INITIATION OF THE METH USE

Despite a wide range of background characteristics, informants shared similar initiation patterns. Peer pressure, encouragement by friends, and the desire to be accepted by peers were stated most commonly as reasons for first time use. Other motivations included the desire to escape from problems or to support and improve work performance. Such behaviors were usually reinforced by the social environment where informants lived. Some of the informants had prior experience with other drugs, such as alcohol, cannabis and heroin. The median age at first use of crystal-meth among the study participants was 18 years (IQR = 25). Initiation most commonly took place in a social setting, together with a group of friends from school or the neighborhood or other acquaintances, in a house or rented room.

*"My friend from junior high introduced me to shabu...we smoked in the school toilet together...I cannot construct the tools by myself, so I always use shabu among a group of friends...me and my friends share money for shabu ... it was fun when using with your friends ... the most difficult part is to quit shabu when your friends ask you to join"* (**17 years old male from Medan**)

*"My friend introduced me to shabu, he said the drug will not cause overdose. I was also interested with the way the drug is consumed. We need to prepare a pipe to inhale the smoke, we use aluminum foil as medium...I felt so light after using it"* (**40 years old male from Medan**)

In the contexts described above, drug use serves as a tool to experience commonality and togetherness among a group of friends, motivated by the desire to have fun, get high and experiment something new. Initiation usually occurred via nasal inhalation of a small quantity of burnt crystal-meth, and generally effects were felt after four inhalations. The initial effects felt by informants included dizziness, shivering, relaxation, lightness, perspiration, and freshness. However, once the initial euphoric effects of the drug wear off, users may experience eating and sleeping disorders, and feeling emotional and anxious. The typical participant had very little knowledge about crystal-meth at initiation. As one 35-year-old informant put it:

*"When I went to a hangout place, my friend introduced me to shabu. They didn't say what it is and I just decided to try. At first, I felt nothing accept that I could not sleep ... the next day I tried again and I still felt nothing except chills and dizziness. I was curious and tried again on the third day, and this time I felt joy and happiness using shabu"* (**35 years old male form Makassar**)

On the other hand, informants who engaged in sex work were more likely to have been introduced to crystal-meth by one of their clients, leaving them in a condition with limited options if they did not agree to participate.

*"My client introduced me to shabu, he said it helps to calm my nerves and prevents me from overthinking my problems ... I also need shabu to keep me awake until late at night while waiting for clients to arrive"* (**MD8 - 22 years old female sex worker from Medan**)

*"I never bought shabu on my own if not because of the nature of my work [serving clients]. The reason I use shabu is, that I don't make money if I'm not using during my working hours"* (**MK12 – 20 years old female from Makassar**)

Informants commonly reported to initially feel powerful and confident, to have endless energy and increased productivity, as well as enhanced sexual performance. These perceived benefits then become the primary reasons why the informants keep using the drug. Crystal-meth can provide energy to work for prolonged hours, which for many becomes the justification to keep using the drug, as stated below:

*“If I don’t use crystal-meth, how can I have the energy to serve 3-4 client to have sex?” (MD7 - 24 years old female spa worker from Medan)*

*“I know shabu since 2010. I work in the entertainment industry, for me it seems that 24 hours a day isn’t enough. Sometimes shooting starts at 2-4 AM and I need to wake up early to teach dancing from 8 AM to 4 PM. I need to do the choreography, make my own costumes and mix songs. I used shabu as doping to keep me stay awake” (J14 – 43 years old male from Jakarta)*

The method of how crystal-meth is being used has not changed since the initiation stage. All the informants in this study use crystal-meth by smoking. Only one informant stated to have tried injecting meth due to the limited amount available at the time. Some informants reported to have heard about people who inject crystal-meth, largely in Makassar. Most of the informants stated to be disgusted by the method of injecting shabu:

*“I tried to inject shabu once when I was in prison. I got a similar effect but I lost the ritual effect of burning shabu that I like the most” (MD11 – 33-year-old male from Medan)*

*“In Makassar we rarely see putaw (heroin) now, because many heroin users shifted their addiction to shabu. They are the ones who inject shabu, because they’re already familiar with injection...I assumed 10% of crystal meth users in Makassar are using through injection” (MK6 - 30 years old male from Makassar)*

*“I’ve seen someone inject shabu before and I asked whether it is dangerous [to inject] and that person said that if he only has such a little amount of shabu, he cannot feel anything if he smokes it. I don’t have the guts to try injection, I am afraid of needles” (MK10 – 25 years old female from Makassar)*

Informants noted that the quality of the crystal-meth they acquired has declined in recent years. But at the same time, access to and availability of the drugs has not changed compared. Although informants expressed that in previous years it was easier to find drugs in the market, most also admitted that they were facing no problems when searching for drugs, but that they have to pay more for a lower quality of crystal-meth. Purchases are either made individually or by sharing the cost among peers. In all sites, the quality of the meth available on the street varies, but most emphasized the declining quality of meth, mostly local products (often mixed with other substances), while in the past, meth was mostly imported and purer, that is of better quality:

*“... in the past, it was more frightening to shop [for drugs] ...the quality [of drugs] was better in the past than it is now...”(MD\_03)*

## TYPES OF METH USING PATTERNS

There are three main patterns of crystal-meth use based on the frequency of using the drug; the motivations for using it, and the ways the drugs are used. The three patterns thus are: frequent users, practical users and casual users.

### FREQUENT USERS

Frequent users are more likely to use the drug every day. Frequent users mostly reported to use meth to improve motivation and gain more confidence in their jobs. One female meth user reported that she uses meth on a daily basis because she has a partner who is selling drugs. Another female reported that she uses daily because of the nature of her work, which requires her to accompany 'guests', which may require using the drug. Despite their daily use, these informants did not necessarily describe themselves as addicts. Even though some admitted that crystal-meth causes problems in their lives and has an effect on their daily routines, they claimed to still be able to manage their drug use and life. From a total of 38 informants, only five informants fit the criteria of a frequent user.

*"I use shabu every day now, my dosage now reaches 0.5 grams a day, generally I consume in the morning, after lunch and at night. What can I say, I cannot do some activities if I'm not using shabu" (J12 – 43 years old male from Jakarta)*

### PRACTICAL USERS

Meth users are categorized as practical users when they use meth for 3-4 times a week. This type of user will use meth based on their need, either to support their work or unable to use rapidly due to their financial limitation.. Practical users tend to always find reasons to continue using meth but with the expectation to be able to reduce or quit using in the future, when they would find a better job or have a more stable life. By continuing their use, informants learned from their own experience how they could interrupt using with no adverse effects. In terms of social or health impacts, users in this category reported that no significant social problem emerged as a consequence of their habit. They also reported that their relationships with family and friends were still good because many of them did not disclose their habit to their spouses or families. Informants in this study who were practical users were mostly sex workers or blue collar workers.

*"I need shabu to keep me awake until late night while waiting for clients to arrive" (MD8 - 22 years old female sex worker from Medan)*

### CASUAL/SOCIAL USERS

Meth users who are categorized as casual users are those who use meth only occasionally, one to three times a month or less, for the purpose of seeking pleasure outside daily routine or to

escape from personal problems. This type of users rely on their friends to find and buy drugs, due to their limited knowledge of drug selling networks. Unlike practical or frequent users, casual users are less likely to develop a dependency to use shabu, stating that they could even resist when offered by friends. They reported that they use drugs based on their desire, availability of the drug or money, and when offered by friends.

*"In a month I can use 4 times, sometimes 3 times, depending on whether I'm in the mood to use shabu" (J02 – 42 years old male from Jakarta)*

*"I haven't used shabu in the past week, no one asked me to join yet ... usually I use [crystal-meth] when my mind is blocked with problems, then I don't have any choice other than shabu, my mind becomes relaxed" (J06 – 39 years old male from Jakarta)*

Type	Duration	Description
Frequent user	Everyday	Admitted to crystal-meth causing problems in their life; the greatest risk associated with shabu is the police, generally their habit has been exposed to family members/spouse; has spent time in rehabilitation/prison; preferred to use shabu individually; needed crystal-meth to perform their daily activities.
Practical user	±3 times a week	Always found reasons to use; preferred to use shabu in group; more likely to substitute with other drug, i.e. alcohol, when crystal-meth is not available
Casual user	±1-2 times/month	Perceive that risk is limited to financial and family problems, has ability to refrain from using for extended time periods, has developed distraction mechanism to avoid using shabu; limited involvement with drug using network; able to refuse invitation to use from a friend, use based on mood;

## MIXING PATTERN

Even though there are three categories of meth users, in reality these categories are flexible and overlapping. Frequent users might reduce their use when they have found a strong reason or motivation to manage their use, and casual users may change their habitual use to become more frequent when having easier access to a drug- selling network. The shift from one category to another is often influenced by environmental and or individual factors. Such factors are drug dependency, family relationships, working conditions, personal problems, peer pressure and influence, and living conditions.

*"I used to smoke shabu everyday but now I reduced to 3 times a week because I need to save money for my baby..." (MD8 - 22 years old female sex worker from Medan)*

*"I became a more frequent user while in prison, I stayed in Madaeng Detention center for 9 months...I met a lot of high profile shabu dealers inside ... I continued my habit after I got out of jail" (26 years old transgender from Makassar)*

## PATTERN OF METH USE

Different types of meth users showed differences in how they preferred to consume crystal-meth. Frequent users are more likely to use shabu individually or with only one partner, either a close friend or sexual partner, than using the drug in a larger group. They prefer to use alone or in a small group due to security and safety reasons. However, in situations where they do not have enough money, they feel forced to pool their money with friends to buy and to share drugs.

*“I prefer to use shabu alone, not because it was more enjoyable, but for security purposes, since using with many people is more suspicious. Except when I did not have enough money, I shar with 2-3 people” (MK6 – 30 years old male from Makassar)*

Meanwhile, practical users generally use drugs in groups of 3 to 4 individuals. Reasons for using in a group are to pool money to buy drugs, limited knowledge about drug-selling networks, and it is perceived safer and more enjoyable to use together with friends.

Casual users almost exclusively use crystal-meth in groups, rarely individually. New people in the circle mostly is necessary to share the cost of purchasing the meth, either friend's colleague from work, neighbor or dormitory.

*“Now I use shabu the way I smoke cigarettes; I don't want to share it with a lot of people. If I have to, it is only with 2-3 people” (MD1 – 37 years old male from Medan)*

*“... usually we shared money among 4-5 friends, each \$5, who also work in the spa to buy crystal-meth” (MD7 - 24 years old female spa worker from Medan)*

## METH USE AND SOCIAL NETWORKS

A wide social network makes it much easier to acquire drugs. Informants wanted to be sure that they were using meth with someone they knew, either a childhood friend or an acquaintance from the kampung/neighborhood. The social network connecting a small group of users, formed over years of using drugs together (either from previous times when starting with heroin or current groups of meth users) constituted the closest social relations of informants. Similarly, female sex workers in Makassar stated that their closest relations were with peers at work. These were friends they met and interacted with on a daily basis. Although in Medan, respondents with a wide social network use crystal meth with wife and a group of 30 acquaintances. One just needs to know spots to get the drug, where drug and paraphernalia are made available by the dealer.

In all three cities informants reported to have used crystal-meth in small groups of friends (three to five people) within the last month. Together informants named 116 individuals whom they usually used meth with. Three quarters of these were described as friends (confidants, close friends, school friends, childhood friends, neighbors) and the remaining quarter were family members, guests (clients of sex workers) and partners. None of the informants named their acquaintances as current crystal-meth peers. The average age of friends was similar to that of

the informants (31 years old for men, 26 years old for women). Most friends lived in the same neighborhood as the informants and therefore they could meet and interact with each other almost every day. As a consequence, they tended to use drugs together almost every week, usually by pooling their money together to buy drugs. Only few of the informants, mostly regular users, bought drugs using only their own money.

The entry of a new member into a network of users tended to stir fears of being caught by authorities, as new members could potentially be police informants. Some informants (mainly males) mentioned that they did not feel comfortable using meth with members of the opposing sex, as they felt that it can cause distraction. For female users, the dependency factor was strongly present in many narratives:

*“...because he is my partner, and every day he needs his “dosage of doping”, whether I like it or not, I must follow ...” (MD\_05)*

Family members and neighbors, who constitute another close social network, have often been aware of the informants' involvement with drugs, as many have previously consumed heroin. However, many of these informants have not disclosed their current use of meth:

*“...the home environment near Papa's home, they now that I am a user of putaw [heroin] from past times ... Now what they are aware of is that lately I have stopped using (drugs) ... but only few know that I am using shabu ...” (MD\_05)*

Because some families have previous experience of enduring respondents' heroin (Putaw) addiction, there is a certain level of acceptance of meth use, because it is considered lighter and less dangerous than heroin. Meth is allowed because families feel that the usage of meth is not excessive, and that it actually helps users to fulfill their jobs, as long as they are not caught by the police.

## ADDICTION

Perceptions of addiction vary among meth users in this study. For some meth users, the meaning of meth addiction is different from heroin addiction. Some participants with experience using heroin reported that the level of craving and compulsion to smoke crystal-meth was less severe as compared to heroin:

*“I shifted my heroin use to shabu because nowadays it is hard to find heroin. My drug expenses are less now, only \$15 a day, \$10 for Shabu and \$5 for Suboxon and anti-depressant pills. I get the sensation of injecting through Suboxon, and if I mix these three types of drugs I can feel a similar effect like when I used heroin” (MD11 – 33-year-old male from Medan)*

For others, addiction is understood as the inability to reduce the frequency and or dosage of a drug without experiencing severe cravings and withdrawal symptoms, or the inability to decide when to use the drug:

*"I cannot say I'm addicted to shabu because although I use it every day to support my daily activities, I can reduce my dosage. As long as I got 1-2 shots everyday it is enough for me"* (**MK10 – 25 years old female from Makassar**)

## EXPERIENCE IN DRUG TREATMENT

Study informants experienced recovery in different ways. Many have previously tried to quit using crystal-meth on their own. Only crystal-meth users who have a history of heroin use have previous experience with rehabilitation centers. This may be due to the government's attempts to increase access to healthcare services for HIV prevention, care and treatment, which targets injecting drug users. Drug rehabilitation centers have existed for quite some time across the country, but they mainly focused on injecting drug users who injected heroin and rarely expanded services to crystal-meth users.

*"Eh ... services to stop (using) are for those that are being reached out. Don't just reach out for IDUs ... but also for other drug users ... give them skills so that they can be distracted from using drugs again ..."* (**MK8 – 25 years old female from Makassar**)

Currently, crystal-meth related services are still not widely available. In addition to that, many meth-users are reluctant to seek rehabilitation services because they perceive meth to be less addictive and more controllable than heroin. The following quote from a respondent from Jakarta highlights this: *"There is this feeling of a craving but not an addiction. I have this urge to use it, which is for sure, but only for shabu."* (**J\_01**). There are also those that have tried to overcome their addiction to meth through traditional means: *"... I have tried herbal medication but was not successful ..."* (**MK\_04**). However, most prominent in terms of motivation were social reasons, e.g. family obligations and the fear of being unable to financially provide for a family if in jail, which helped users to control their consumption of meth:

*"I am reluctant (to use meth) because if I do [use meth], there will be no one to work and provide for my family ... I decided not to use because if I do I will have to leave my family, and I don't want to go to rehab because it makes me feel imprisoned"* (**MK2 – 21 years old female from Makassar**)

*"... I have to think 10 times if I go to rehab because I started using [regularly] again, my wife will be neglected ... my kid won't go to school ... where would I get money for school fees ... what would they eat ... what happens with rental money ... if my wife works, who will take care of the kids ... I have discussed all this with my wife ..."* (**MD12 – 28 years old male from Medan**)

Despite Indonesian Narcotics regulations that promote rehabilitation for users rather than imprisonment, informant stated that they still needed money, and thus financial worries prevented many from seeking rehabilitation:

*"... when I get caught, I have to pay \$6,000 to get a rehabilitation sentence" (MD9 – 40 years old male from Medan)*

Families play an important role in inhibiting informants from using, while friends more often encourage them to use. Informants from Jakarta mentioned that it is important to stay away from peers who were using:

*"I went to BNN [National Narcotics Board] rehabilitation for 5 months, relapsed after 1 month, and got out because I met with my friends" (MD2 – 40 years old male from Medan)*

*"Because using shabu is different from using putaw, which gives you cravings ... With shabu, if you have money then you need the drug, and with friends supporting it then that's when it happens. But when alone or whatever, we can still distract ourselves ... that is why I don't feel I need rehab ... by mere will I can forgo needing the drug, second is family, and third is keeping a distance from friends ..." (J11 – 30 years old male from Jakarta)*

*"... when at home, I block the numbers of my friends so that they can't invite me out ... when at home I am more tranquil, there is more to do at home ...." (J03 – 18 years old female from Jakarta)*

There are also those who have actually tried to seek out recovery programs, some who are first time users, and others who have used for several years. Some have managed to stop using for some time:

*"The hardest time to avoid shabu is when you're in a craving period. I describe craving as an overpowering desire to use crystal-meth at that moment. Craving may arise when you meet crystal-meth peers. I used to quit shabu for 5 years, but it was just so hard when your friends offer you shabu again. I was able to say no at first, but I gave in after the third offer" (MK6 - 30 years old male from Makassar)*

*"I stopped using for 2 months, but I've done too many mistakes during work, that was my motivation [to use again] ... and when my long-time friend came to Jakarta, I used shabu again" (J10 – 25 years old male from Jakarta)*

There are also those that went cold turkey at home, "... I went cold turkey at home" (MD4).

An important finding relevant for providers is that not all informants are aware of rehabilitation services, as this user from Jakarta stated: *"I have heard from TV but don't know any rehab centers, heard and know many friends that went to rehab, but don't know what centers can support (me) (J\_01)*. There are also those that are not comfortable with the BNN, *"...when I hear BNN ... I get goose bumps ... I don't want to have anything to do with BNN anymore ..." (MK10)*

Some have attempted to stop using through rehabilitation centers or Community based Rehabilitation (PABM) services:

*"I went to rehab for 7 months" (MK3)*

*"I participated in the program PABM at Caritas, but relapsed (went clean for just 5 months) (MD2)*

*"I went to rehab while using putaw and went through subuxone therapy" (MD5)*

As stated previously, not all respondent felt the need to seek out drug rehabilitation services. Rehabilitation was perceived to be for those that cannot control their addiction, and not for those who can refrain from using for one or two days. It was felt that as long as the addiction and use were not excessive, rehabilitation was not needed.

*"I never stopped using; in the last year I only used a bit to cover my cravings" (MK\_10)*

*"I never stopped or went to any recovery programs" (MD\_01)*

*"I never totally stopped, only substitution" (MD\_03)*

*"I don't feel I have any problem, I can hold it for 1-2 days"*

Another supporting system, besides families, are programs provided by local NGOs. Field or outreach workers of NGOs provided much needed information and psycho-social support.

*"He/she knows that I like to use (drugs), what is good about him/her is that he/she supports me to change ... it made me think, wow ... this person is so kind ... supports me ... watches over me ...wants to see me change ... if he/she was not here ... there would be no more control" (J\_01)*

Informants expressed that information is imperative: *"To have good information about drugs and HIV will be good ..." (MD\_03)* or *"... we don't have any information about drugs and HIV risks ..." (MD\_06)*

In Makassar, informants showed the greatest level of anxiety in relation to government bodies (police, BNN), as well as society more generally. Hence, informants tended to avoid rehabilitation services provided by an institution, both public and private, and opted for self-medication. Feelings of anxiety and paranoia were most pronounced among heavy meth users, sometimes to the point of having delusional episodes, such as constantly looking out for the police, or even leading some to physically assault friends suspected to be police informants.

*"... a friend was constantly paranoid, as if he was being framed by his friends ... for instance (when everybody is going back home) then he would shout 'don't forget your jacket, be careful there might be some stuff inside'... my friend felt like he was being tricked by his friend and has beaten him up because of it ...'you have reported me to the police, right!! ..." (as a result) we all ran away from him ..." (MK5 – 35 years old male from Makassar)*

## LEGAL PROBLEMS

Most of the informants were aware about increasing crystal-meth related arrests and raids by law enforcement officers. Although raids happened in all three study sites, the nature of the raids differed. In Medan for instance, law enforcement officers are most likely to search dormitories or rented rooms, while in Jakarta and Makassar dealer houses, night clubs and hotels were mostly targeted. Frequent raids had an impact on where crystal-meth was being consumed. Informants in Medan stated that the safest place to use is in Kampung Kubur, an area where crystal-meth and user equipment were readily available. In Jakarta and Makassar drugs were most commonly used in rented rooms and houses, private homes, and private karaoke rooms:

*"The first time I tried crystal-meth, we used it in a [karaoke] room. The place is safe, rich people generally hang out in the rooms to use shabu and ecstasy. At that time, a friend of my friend just arrived from Jakarta and brought a lot of shabu ... I agreed to join since this man brings happiness, I had a lot of family problems at that time and I wanted to forget, even for a moment ... this man came once a week and he always trusted us - the three girls to accompany him using shabu"*

**(MK10 - 25 years old female from Makassar)**

*"We would usually rent a room in a club. It was protected, they placed 1 person in front of the room and he would be in charge for as long as we were using shabu, it's safer ... I avoid using in a hotel, people will wonder when they see 4-5 men enter a room together, it must be a drug party they will think"*

**(J12 – 43 years old male from Jakarta)**

The informants had mixed opinions regarding police attempts to halt crystal-meth distribution and consumption. Although some of them saw crystal-meth related incarceration as a logical consequence of law enforcement duty, they felt that the raids should focus on eliminating dealing rather than targeting users. Several informants expressed their distrust towards the way arrests were made and believed that the legal system is corrupt. In addition, they felt that local police raids had a minimal effect on drug distribution. Those with a wide drug network could easily find other sources despite the raids. Only a small number of informants felt that legal consequences linked to crystal-meth use motivated them to stop. Nevertheless, some informants believed that quitting crystal-meth is only feasible when the drug is not available in Indonesia. Those who have been imprisoned reported to still be able to find drugs inside prison:

*"I don't understand with our government, they prohibit drugs, but they also keep providing it. Why do they only arrest the users? At least 15 people have been captured within a month"*

**(MD2 – 40 years old male from Medan)**

*"Errr, the police might be involved in the distribution, but the drug supply is still available no matter what ... I think in Indonesia we have too many [crystal-meth] suppliers"*

**(J12 – 43 years old male from Jakarta)**

*"I still used shabu in jail when I was arrested in 2011, for 2 years, ... you can find shabu easily [in prison] and it's cheaper than the price outside ... you just need to order and wait in a specific room and they will deliver it to you"*

**(MD9 - 40 years old male from Medan)**

## METH USE AND SEXUAL BEHAVIOR

Crystal-meth was reported to play a significant part of sexual experience because of the way meth makes one feel when having sex: “... *it feels good to use shabu first and then ecstasy for sex. When having sex, the sex feels good ...*” (JK\_04). Crystal-meth was described by informants as increasing sexual arousal and lowering inhibitions. Interestingly, respondents preferred using meth rather than other sex drugs or tonics: “... *if I may say, the sensation from using shabu is much better ... because we can control it ... so after using (meth), we can control it again, if we are tired we can sleep ...*” (J\_12). Informants stated that they first started using meth during sex out of curiosity and the desire to feel increased assertiveness, passion and excitement. Informants also mentioned longer durability, power and romanticism as reasons for using meth during sex.

Although almost all informants agreed that meth has an effect on sexual arousal, not everyone experienced this in a positive way. For example, male informants stated that they felt sexually stimulated, while at the same time having difficulties to have an erection. For women, the longer duration of sex causes discomfort, and at times even injury to the vagina. Some subjects acknowledge that using meth before sex increases the likelihood to engage in unsafe sexual behavior:

*“One of the reasons why I don’t use shabu anymore is because of the sex, because I can’t control myself, resulting me in not using condoms, then again I will do it again ...” (J\_14)*

Condom use during sexual activity among informants varied from those using them regularly to those never using condoms. In all three cities inconsistent condom use was reported. Those who admitted to being HIV positive always used condoms, however, others only used condoms sometimes or never at all. Condom use also varied depending on partner type. With regular partners condoms were rarely used. Only four informants reported that they used condoms to prevent STDs and HIV. Some used condoms as contraception. As noted by a respondent from Jakarta, there is a lack of attention given to the prevention of sexual transmission:

*“IDU’s have sterile needles available, so when using needles you have to think about being infected with HIV, but people don’t think about that after using shabu, usually we have sex and have sex for a long time. This can cause blisters (which can be an entry point for HIV)” (JK\_05)*

Interestingly, respondents were aware of HIV programs such as harm reduction. And they pointed out an important fact, which is that these programs did mainly focus on safe injecting practices, ignoring drug users’ sexual behaviors. Consequently, the prevention of sexual transmission of HIV and STD’s among drug users has not been addressed properly. As a result, self-medication and the preventive consumption of un-prescribed antibiotics before unprotected sex, or even toothpaste for prevention, were widespread.

## SEXUAL NETWORKS

The sexual networks of meth users in this study are diverse. There are those who are sexually active with one single partner, and those who have multiple partners, including partners who are sex workers. A total of 58 sex partners were named by informant as during their current sex partners. Twenty-three of the sex partners were men and thirty-five were women. Sexual partners of male informants were usually younger than the informants, and conversely the sex partners of female informants were older. Types of sex partners reported by male informants included commercial sex partners (female sex workers), casual partners (friends or acquaintances), and regular partners (girlfriends or wives). Drug using friends were reported by more than half of the informants as sex partners.

Most of the informants knew their sex partners for more than six months, with only few reporting that they met their sex partners less than one month ago. Half of the informants reported that they used meth with their partners before engaging in sexual encounters. Some informants, as can be seen in the statement of an informant from Makassar below, admitted to having large numbers of sexual partners when using meth: "... *unlimited number ...*" (**MK\_06**). In Medan, a respondent reported to have sex with his wife and also another regular partner, using meth with both. Furthermore, some frequented sex workers on a regular basis.

The sexual networks of female users varied between different professions (e.g. sex workers, housewives), partnership status (e.g. married, in other relationship or single) and informants who reported to be lesbians. Some informants stated that they liked to have sex without any form of commitment. Female sex workers usually had about 2 to 3 clients per days, as reported by a respondent from Makassar. There were also sex workers who preferred to consume meth while being with a client.

## SECTION 4: DISCUSSION

This study has illustrated that patterns of meth use in the three study cities are dynamic and influenced by factors at a personal, inter-personal and social level, occurring within a specific setting and situated within the informants' life experience. This has been documented in various previous studies (Fast et al, 2014; Yih-Ing Hser et al, 2009). At a personal level, the use of meth is mostly motivated by the desire to be accepted by friends, to escape from personal problems, and or to enhance stamina and work performance. At an interpersonal level, initiation of meth use is strongly influenced by the social network during the informants' youth. Initiation to meth use at an older age is usually linked to the work environment, which allows for opportunities to meet friends or clients who are also meth users. The social environment where informants lived, the availability of meth in the neighborhood, also played a role in relation to the initiation and continuous use of meth. This situation is also reinforced by the fact that most of the informants live in densely populated slum areas where social control is less enforced.

Different from other studies (Kish, 2008; Dagenhardt & Topp, 2003, Wood et al, 2008), where meth was found to be both smoked and injected, this study did not have any informants who reported injecting meth. This would mean that the dominant mode of transmission of HIV, STIs, and HCV among Indonesian meth users is through unprotected sexual behavior. Adding to this, crystal-meth users in the study described an increased sexual desire, high levels of sexual activity, have multiple partners, and rarely use condoms consistently. Sexual risk behaviors reported in this study are consistent with previous studies reporting higher sexual risk behavior among heterosexual meth users compared with other drug users (Rawson, et al, 2002; Molitor et al, 1998; Semple et al. 2004). In addition to HIV risk behaviors, this study also identified other health risks related to meth use, such as the risk of overdose, incarceration and mental health disorders.

Another interesting finding of this study is that perceptions of addiction among the informants differ from general understandings of addiction. Most informants perceived that meth is not addictive because they felt that they could still manage their use, even when using daily. This is in line with the results of a study among meth users in China (Kelly et al, 2014), where a majority of the informants perceived that using meth is not addictive, or at least that the habit could be controlled to some degrees. The main reasons for ongoing meth use were to enhance stamina and performance at work or to escape from personal problems. Most believed that they could stop using any time if they needed to. Consequently, they do not feel at risk due to their drug using behavior. Only few of the informants reported that they had been undergoing drug rehabilitation or accessed other health services. The only significant perceived risk for the informants was the risk of being arrested by the police or national narcotics board. These insights are important for the development of future interventions to help users reduce their health risks related to HIV, as well as psychosocial disorders.

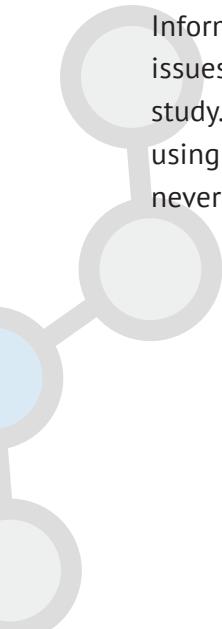
As this and previous studies have pointed out, the social networks of meth users play a significant role in relation to the social support but also the risk behaviors of meth users (Amirkhanian, 2014; Young et al, 2014; Young et al, 2013; Semple et al, 2010; German et al, 2008). The significant role of the social network in relation to drug initiation, continuing use

and, to a lesser degree, temporary or complete cessation has been clearly documented in this study. In addition, almost all the informants reported that through the network they gained all their knowledge on drugs and related effects, and their attitudes towards drug use and drug using behavior were mainly learned through their interactions with the members. Therefore, any intervention which intends to reduce risk behaviors or improve health seeking behaviors should consider the existence and importance of these social networks.

Through the network information and or knowledge on the drug, its effects, and availability are provided. Moreover, various forms of assistance may also be provided by the network (e.g. borrowing of money, pawning things, pooling money, or providing drugs). Temporary cessation or relapse may also be influenced by a user's social network.

The sexual networks of informants in this study are diverse in terms of characteristics, size, and closeness among its members. Female informants tended to report more sexual partners who are also meth users, while male informants more frequently reported their sex partners to be girlfriends or wives who were not necessarily meth users. However, some males also reported meth using sex workers as sex partners. These findings are consistent with the results of a study conducted by German et al (2008), which found that female meth users had larger sexual networks with more meth users. These findings also indicate that female meth users tend to depend more heavily on their male sexual partners for procuring drugs, as they have more limited access to drug selling networks. In the case of female sex workers, meth is often used in the company of their clients before having sex. Since meth is perceived as a sexual enhancement, more than half of the informants reported that they use meth prior to sexual encounters. Most of the informants reported to have multiple sexual partners, and only few admitted that condom use was rare. Condom use was reported by most male meth users who bought sex from sex workers, but contradicting this, none of the sex workers in the study reported that they used condoms when having sex with their clients. In contrast to a study conducted by Flood (2003), which found that the decision not to use condoms is influenced by the type of sexual partners, in this study the decision not to use condoms is rather seen as a reflection of a low understanding of HIV risk among informants. The low risk perception related to the transmission of HIV does not come as a surprise, as only few of the informants have been exposed to HIV programs in their cities. Efforts to increase condom use should therefore be expanded to also reach meth users, since they have been largely neglected by previous HIV programs in Indonesia. By taking into account the nature of meth users' social and sexual networks, this population could be reached and condom use could be promoted.

This study is one of few studies in Indonesia, which has attempted to explore the patterns of meth use and related implications for HIV risk and health seeking behaviors. While the findings of this study are unique and valuable in the Indonesian context, the limitations of the study should also be considered. First, the findings of this study may not be generalized to describe all crystal-meth users in Indonesia, because the cities of Jakarta, Medan and Makassar are densely populated urban centers known to be the centers of drug trafficking and dealing in Indonesia and do not represent the Indonesian population as a whole. Contexts described in the study might be different in other cities or rural areas. Second, in addition to the small number of informants, this study used the chain referral method as the recruitment method, which might lead to bias in



regards to certain characteristics of meth users in the three cities. Consequently, there is a certain degree of variability related to the research findings. However, by comparing the findings of this study with other studies from abroad, similarities and differences could be highlighted. Fourth, data collection of this qualitative study was conducted in a very short period of time in each city. Information has only been retrieved from meth users. Strategic stakeholders who work on drug issues (NGOs, Police, NNB or Health Office and Social Affair Office) were not interviewed for this study. Thus, there is some missing information of contextual factors in this study. However, the using of secondary data from previous studies allowed for some of these contextual factors to nevertheless be addressed in this study.

# SECTION 5: CONCLUSION AND RECOMMENDATION

## CONCLUSION

The main objective of this study was to explore the patterns of meth use and related implications for HIV risk and health seeking behaviors among meth users in the cities of Jakarta, Medan, and Makassar. The study concludes that patterns of meth use are dynamic and influenced by personal, inter-personal and social factors, which occur within a specific setting, and should be interpreted against the informants' backgrounds and life trajectories. Initiation to meth use was found to be mainly triggered by peer pressure, friends' encouragement, and the desire to be accepted by peers, at an early age. Other reasons included the desire to escape from personal problems and to support and improve work performance. The social environment where informants lived reinforced these behaviors. Social networks played a crucial role to provide informants with knowledge and information on drugs and related effects, the network of drug selling, and provide help or support (borrow money, pawning things, pooling money, or provide drugs). Often, temporary cessation or relapse in using meth were also influenced by the social network.

In this study three overlapping meth using patterns were identified. Firstly, frequent users, who use meth on a daily basis and tend to do so independently of their social network. Secondly, practical users, who use meth on a regular basis, but not as frequent as the frequent users. This type of users has intensive interactions with other members of their social network for purchasing (by pooling money) and using (by sharing) drugs. Thirdly, casual users, who use meth on a situational basis. This type of users rely on their friends to find and buy drugs, due to their limited knowledge of drug selling networks. They tend to use meth for the purpose of having fun and they think that the practice of using meth does not lead to addiction as long as it is only used occasionally. Users may move from one using pattern to another, depending on specific events and their life situation.

Addiction is an important theme explored in this study. Most of the informants reported that the use of meth does not necessarily lead to addiction. As long as they perceived they could manage their use and were able to perform their daily routine, they did not consider themselves to be addicted. Informants tended to associate drug addiction with heroin use. For most informants, meth use does not lead to addiction and thus it is not necessary to worry about negative consequences, except for financial considerations or legal problems. This seems to be rooted in the belief that rehabilitation or drug treatment is only needed for heroin addiction, and not for meth use, as meth use, according to most informants, can be controlled by the user. However, some informants stated that they were in need of psychological services to deal with depression, anxiety and stress, or required legal aid as a consequence the consequences of their meth use.

All informants of this study stated that they were sexually active and most of them had multiple sexual partners, either currently or in the past. Partner types consisted of regular partners, casual partners and commercial partners. Overlapping social and sexual networks were common among

female meth users. It was also found that female meth users often depended on their sexual partners to procure or use drugs due to limited resources or their limited access to drug selling networks. Unbalanced power relations between female meth users and their partners could be observed potentially leading to risky sexual behavior (no condom use). Overall, only few female meth users reported that they used condoms during sexual encounters with different sexual partners.

Information regarding drug related health consequences, which can include severe mental and physical health complications, is limited. Users largely rely on information circulating within their social networks, which may not be accurate. Myths and misconceptions are widespread and may prevent users to access much needed health services. Information related to drug treatment programs or HIV services for meth users is scarce. The current AIDS program only focuses on people with injecting drug use (PWID) and no interventions or programs are targeted at meth users. Drug treatment services provided by the NNB or Ministry of Social Affair are perceived to be reserved for the compulsory treatment of those who have been arrested or self-reported their addiction to the Recipient Institution of Compulsory Report (Institusi Penerima Wajib Lapor), as mandated by the Law 35/2009. Limited information on the one hand and the perception that meth does not lead to addiction on other hand lead to a limited number of meth users accessing health services or drug treatment.

## RECOMMENDATION

Based on this study's findings, a number of recommendations for the development of interventions targeting meth users have been formulated:

1. Outreach activities and intervention programs for meth users should be urgently developed due to the increasing number of meth users, as documented in the survey conducted by the NNB, as well as the findings reported in this study. The national AIDS program should include this population as a priority due to heightened sexual risk behaviors among meth users, including low perception of HIV risk, low frequency of condom use, and frequent multiple sex partners. Moreover, drug treatment services should be designed to meet the needs of meth users, especially for psychosocial services.
2. To reach and effectively engage meth users in prevention and treatment programs, intervention programs should take into account perceptions of addiction as expressed by the informants in this study. Differing perceptions regarding addiction between health practitioners and meth users may lead to misguided interventions for meth users. Targeted education for meth users on the physical and mental health consequences should be carried out immediately, in order to minimize meth related morbidity and mortality.
3. Life skills education aiming at preventing youth to engage in drug use in more generally, or meth use more specifically, should start at an early stage of education, as findings from this study indicate that initiation meth use frequently occurs between the 6th and 7th grade. The importance of social networks (e.g. peers from school or within neighborhood) should

be recognized in relation to drug use initiation patterns among youths and young adults. Moreover, attention should be paid to the living environments of young people, especially disadvantaged urban neighborhoods.

4. Policy and program efforts specifically targeting drug use and sexual behavior among female meth users should be developed due to females heightened vulnerability within unbalanced power relationships with male meth users within social networks of meth users. Programs that fail to take into account power relations within sexual relationships between male and female meth users run the risk of leaving female meth users more prone to HIV risk.
5. Current understandings of patterns of meth use are based on a survey conducted by the NNB, which does not specifically focus on meth use, and some other qualitative studies. Thus, the size and magnitude of meth use and related problems are difficult to be grasp. However, it will be important to gain a better understanding of the magnitude, distribution and patterns of meth use in Indonesia in order to help develop appropriate programs and interventions. Furthermore, it is imperative to conduct more studies, both qualitative and quantitative, in areas identified as harboring large numbers of meth users, such as Jakarta, Denpasar, Batam, Makassar and Medan.

The following considerations should be taken when designing future the surveys:

- a. Since meth users are a hidden population, respondent driven sampling is the most common method for recruiting survey participants (Kimani et al, 2014; Kelly et al, 2014).
- b. Currently, the Integrated Biological and Behavioral Survey (IBBS) on HIV and AIDS only includes PWID populations. Future surveys should also include meth users to estimate the prevalence of HIV among this group. Two of the study informants admitted to being HIV positive. In addition to HIV, such surveys should also cover STI and HCV prevalences due to similar modes of transmission.
- c. Behavioral surveys are of equal importance and should cover the different stages of the drug using cycle (initiation, temporary cessation, relapse, and quitting) and include a life course perspective, which aims at assessing respondents' drug use from early to later stages in their lives. Furthermore, it is important to study the social networks and living environments of meth users, given that both play a significant role in relation to drug initiation and subsequent use. Equally important will be the mapping of sexual networks, to gain a better understanding of users' sexual behavior and HIV risk practices, and how this is linked to the broader social and cultural context of users. Last but not least, engagement with drug treatment and rehabilitation services and other health services should be examined, in order to improve intervention efforts targeting meth users.

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