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Amphetamine-type stimulant use among men who have sex with men (MSM) in Vietnam: Results from a socio-ecological, community-based study

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ABSTRACT

Introduction: Amphetamine-type-stimulants (ATS) use is associated with HIV-related sexual risk behaviours and is an emergent problem among men who have sex with men (MSM) in Vietnam. The purpose of this study is to describe ATS use patterns and understand the correlates of recent methamphetamine use from a socio-ecological perspective.
Methods: From September through December, 2014, 622 MSM were recruited in Hanoi and Ho Chi Minh City, Vietnam. We collected information on demographic characteristics, HIV testing behaviours, use of ATS and other recreational drugs (ever and recently), sexual sensation seeking, depressive mood, experienced and internalized stigma related to homosexuality, social involvement with other MSM, and perceptions of ATS use in MSM networks. We performed descriptive statistics to describe ATS use patterns and multivariate logistic regression to establish independent correlates of recent methamphetamine use.
Results: Nearly one-third (30.4%) had ever used ATS, including 23.6% who had used methamphetamine, 4.3% who had used amphetamine ('speed') and 20.9% who had used ecstasy. 20.1% and 11.9% had ever used methamphetamine and ecstasy, respectively, during sex. Eighteen percent of methamphetamine users were classified as engaged in high-risk use. Recent methamphetamine use (in the last 3 months) was associated with participants perceiving more methamphetamine use in their MSM network, recent sex work, and higher sexual sensation seeking scores.
Conclusions: ATS use is relatively prevalent among MSM sampled in Vietnam's main cities. Interventions to address methamphetamine are warranted for MSM in Vietnam. Methamphetamine treatments are needed for high-risk users.

1. Introduction

Internationally, amphetamine type stimulants (ATS) are the second most commonly used type of illicit drugs, after cannabis/marijuana (United Nations Office on Drugs and Crime, 2010, 2013b). In 2009, the United Nations Office on Drugs and Crime (UNODC) estimated that worldwide there were 13.7 to 52.9 million people aged 15–64 (equivalent to 0.3% to 1.2% of the total world population in those age groups) who had ever used any kind of ATS (United Nations Office on Drugs and Crime, 2010). ATS can be classified into two groups: the amphetamine substance group and the ecstasy substance group (United Nations Office on Drugs and Crime, 2010). The substances in both groups can be ingested, injected, inhaled, snorted or smoked and can have immediate accelerated physiological and psychological effects which may last up to ten to 12 h for amphetamines or three to 6 h for ecstasy (Colfax and Guzman, 2006; Nordahl et al., 2003). While amphetamines are classified as psychoactive stimulants, ecstasy can have both psychoactive and hallucinogenic effects in high doses (World Health

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Organization, 2004). Regular ATS use has been found to be associated with long-term adverse health impacts such as depression or psychosis (United Nations Office on Drugs and Crime, 2013a). The use of ATS, particularly methamphetamine, has been found to be associated with an increased prevalence of sexual behaviours that may increase the risk of HIV or sexually transmitted infections (STIs) such as condomless sex (Beyrer et al., 2004; Celentano et al., 2006; Colfax et al., 2010, 2004; Colfax et al., 2001; Klitzman et al., 2002; Koblin et al., 2003, 2007; Mansergh et al., 2006; Rusch et al., 2004), having more sexual partners (Molitor et al., 1998), having sex with anonymous partners (Parry et al., 2008), or participating in group sex (Prestage et al., 2011). Injection of ATS can also facilitate HIV or hepatitis infection if unsafe or unsterile injecting practices are practiced (Colfax et al., 2010; Martin et al., 2010). A recent meta-analysis of 35 studies from nine countries found a statistically significant relationship between methamphetamine use and HIV infection among men who have sex with men (MSM), mainly in high income countries (Thu Vu et al., 2015).

Studies undertaken in the last ten years report different trends in ATS use among gay, bisexual and other men who have sex with men in different places in the world. A study using 2008–2011 drug use surveillance data of substance using MSM in Los Angeles (Reback et al., 2013) reported a significant upward trend in methamphetamine use in the previous 30 days (23.7% in 2008 to 27.4% in 2011). In contrast, a study drawing on annual behavioural surveillance data of MSM in Sydney, Melbourne and Queensland in Australia observed a downward trend in ATS use between 2004 and 2011. However, the self-reported rates of ATS use were high in this study; ecstasy was the most commonly used ATS, reported by 36.2% in 2004 and 25.7% in 2011; methamphetamine was the least commonly used ATS, reported by 15.4% in 2004 and 10.0% in 2011 (Lea et al., 2013). A cross-sectional study undertaken in 2011 with 254 MSM attending sexual health clinics in London, UK, found low rates of ATS use in the last previous 30 days; 5.5% reported using ecstasy, 0.8% reported using amphetamine, and 1.2% reported using methamphetamine. However, rates of ever having used ATS were substantially higher, with 40.8% reported ever using ecstasy, 29.8% ever using amphetamine and 16.9% ever using methamphetamine (Hunter et al., 2014).

Few studies have been conducted on ATS use and associated harms among MSM in low income or middle income countries. A recent published study from Mexico found that 16.9% of 191 MSM recruited by respondent driven sampling had ever used methamphetamine in the previous month (Pitpitan et al., 2015). A study conducted in 2011 among MSM in Shenyang province, China found that 4% had ever used methamphetamine (Xu et al., 2014a). Another study conducted in 2012–2013 among 3830 MSM from six cities in China also reported a low prevalence of recent ATS use in the last six months, with 2.8% having used ecstasy, 2.5% having used methamphetamine, and 0.7% having used amphetamine (Xu et al., 2014b). In Thailand, the rate of ever having used methamphetamine among MSM visiting a sexual health clinic during 2008–2009 was found to be 12.6% (Chariyalertsak et al., 2011). In Vietnam, no recent study of ATS use has been reported, but a study undertaken in 2004 reported that 4% of MSM in Ho Chi Minh City had ever used amphetamines (Nguyen et al., 2008). Therefore, we conducted this study to explore the rate of ATS use among MSM in the two main cities of Vietnam (i.e., Hanoi and Ho Chi Minh City), and examine correlates of the most common form of ATS use identified in our study from a socio-ecological perspective.

2. Methods

This was a cross-sectional, community-based study, conducted in collaboration with Hanoi HIV/AIDS Prevention Center (Hanoi PAC), the Center for Community Health Promotion (CHP) in Hanoi, and the Centre for Promotion of Quality of Life (Life Center) in Ho Chi Minh City, Vietnam during September–December, 2014. A non-random, convenience sampling method was used to recruit participants as MSM remain a relatively hidden, hard-to-reach population in Vietnam because of homosexuality-related stigma and discrimination (Vu et al., 2008). Potential participants were referred to the study by outreach workers of CHP and the Life Center, via local community-based organizations/groups of MSM and through peer referral of MSM who had participated in the study. Men were eligible if they were 18 years or older at the time of the study, reported having anal sex with at least one man in the previous three months, had good command of listening to and reading the Vietnamese language and consented to participate in the study. The study received approval from the Human Research Ethics Committee of the University of New South Wales (UNSW) Australia (reference HC14130) and from the Institutional Review Board of the Hanoi School of Public Health (reference 014_262/DD-YTCC).

2.1. Data collection

We adapted the socio-ecological model proposed by DiClemente et al. (2005), which proposes that people's behaviours are influenced by their psychological characteristics as well as socio-ecological factors that reflect the surrounding environment, ranging from the proximal community/peer level to the distal societal level. Our adapted socio-ecological model includes three levels: the individual, community/peer and society levels. At the individual level, we assessed participants' demographic characteristics, HIV testing, HIV status, use of alcohol and other drugs, level of sexual sensation-seeking, and depression. Community/peer-level variables included participants' social involvement with other MSM, and their perception of the popularity of ATS use in their MSM social network. Societal-level variables encompassed enacted, perceived and internalized homosexuality-related stigma and discrimination and sex work behaviours (although a recognized economic activity, sex work is illegal and stigmatized in Vietnam).

Face-to-face, structured interviews using a questionnaire were administered by staff from Hanoi Medical University and by MSM peers, all trained by the study team. To ensure confidentiality, interviews were conducted in private rooms at locations convenient for participants, arranged by Hanoi PAC and CHP/Life Center. Interviews were conducted between 8 am and 8 pm on weekdays or during weekends to accommodate MSM who could not participate during office hours. Potential participants received information about the study, were briefed on ethical considerations and consent, screened for eligibility and provided with a unique, anonymous study ID if they met the inclusion criteria and signed a written consent form. Interviews lasted for approximately 35–50 min. We took several steps to protect the participants' confidentiality. Participants were not asked for their full name or address. During the fieldwork in Vietnam, all study documents were kept securely in a locked cabinet at Hanoi Medical University. Data entry was conducted on password-protected laptops owned by the study team; the dataset does not contain any personally identifying information about participants. Once data entry was completed, the dataset was then transferred to Australia and stored on a secure server of UNSW, only accessible by the study team. All the study's documents, including signed consent forms, are stored securely at the Centre for Social Research in Health, UNSW Australia. After the interviews, men received a reimbursement of 100.000 Vietnam Dong (VND) (equivalent to US$5) for their time and expenses, were provided with HIV prevention materials and referred to voluntary HIV testing. Men were also referred to support services, if appropriate or requested.

2.2. Measurement

The questionnaire was developed in English and translated into Vietnamese. Two separate consultation meetings were held, one in Hanoi and one in Ho Chi Minh City, with a total of approximately 20 representatives from local MSM organizations and researchers, to seek input into the questionnaire and colloquial terms for drug use, sexual orientation and sexual behaviours commonly used by MSM. The representatives also commented on the user-friendliness and acceptability of the questionnaire. The questionnaire was pilot-tested with ten MSM in Hanoi and revised as required.

2.2.1. Demographic and behavioural characteristics. We collected the participants' age, education, occupation, monthly income, time living in their city of residence, sexual orientation, gender of sexual partners, age at first sex with men and women, engaging in sex work (ever and in the last 3 months), and self-reported HIV status. Participants were categorized as regular sex workers if they (i) reported ever selling sex and (ii) currently worked in a MSM-specific sauna or massage parlour where transactional sex occurs.

2.2.2. HIV testing. We asked participants if they had recently tested for HIV (having at least one HIV test in the last 12 months). Participants also self-reported their HIV status.

2.2.3. Alcohol and drug use. For ATS and other substances, participants were asked about having ever used them, and, if they had, age at first use, routes of administration, peoples they had used with, and use in the context of sex. Substances assessed included: alcohol, heroin, cannabis, ketamine, methamphetamine, amphetamine ('speed'), ecstasy, poppers (amyl nitrite) and erectile dysfunction medications (EDM); participants also had the option of reporting use of any other substance.