HHS Public Access

Author manuscript

Drug Alcohol Rev. Author manuscript; available in PMC 2019 March 01.

Published in final edited form as:

Drug Alcohol Rev. 2018 March ; 37(3): 333–339. doi:10.1111/dar.12589.

Drug-related stigma and access to care among people who inject drugs in Vietnam

Chiao-Wen Lan MPH, PhD[1], **Chunqing Lin, PhD**[1], **Duong Cong Thanh, PhD**[2], and **Li Li, PhD**[1] **[Professor-in-Residence]**

[1]Semel Institute for Neuroscience and Human Behavior, Center for Community Health, University of California at Los Angeles, Los Angeles, USA

[2]National Institute of Hygiene and Epidemiology, Hanoi, Vietnam

Abstract

Introduction and Aims—There are considerable challenges faced by people with a history of injecting drug use (PWID) in Vietnam, including drug-related stigma and lack of access to health care. Seeking and utilising healthcare, as well as harm reduction programs for PWID, are often hampered by drug-related stigma. This study aimed to examine the impacts of drug-related stigma on access to care and utilisation of harm reduction programs among PWID in Vietnam.

Design and Methods—A cross-sectional study was conducted in two provinces in Vietnam, Phú Thọ and Vinh Phúc. The study participants completed the survey using Audio Computer-Assisted Self-Interview between late 2014 and early 2015. Linear multiple regression models and logistic regression models were used to assess the relationship between drug-related stigma, access to care, and utilisation of harm reduction programs including methadone maintenance treatment (MMT) and needle exchange programs (NEP).

Results—A total of 900 PWID participated in this study. Drug-related stigma was significantly associated with lower level of access to care, but not with utilisation of MMT or NEP. Older age was positively associated with higher levels of access to care. Levels of education were positively correlated with access to care, as well as utilisation of MMT and NEP.

Discussion and Conclusions—This study underscores the need for future interventions to reduce drug-related stigma in society and in healthcare settings, to improve PWID's utilisation of care services. Special attention should be paid to younger PWID and those with lower levels of education.

Keywords

Drug use; stigma; access to care; Vietnam

Correspondence to Dr Li Li, Ph.D. UCLA Semel Institute - Center for Community Health. 10920 Wilshire Blvd., Suite 350, Los Angeles, CA 90024, U.S.A. Phone: (310) 794-2446; Fax: (310) 794-8297; lililili@ucla.edu.

Conflict of interest

None to declare.

INTRODUCTION

Globally, it is estimated that a total of 246 million people used an illicit drug in 2013, a 3 million increase over the previous year [1]. People who use drugs are one of the populations most in need of healthcare services [2]. Primary care practitioners see a large volume of patients and often conduct initial diagnosis before referral to a specialist. Therefore, increased access to primary care and treatment referrals have shown to notably reduce the rate of infectious disease transmission among people with a history of injecting drug use (PWID) [3]. Additionally, harm reduction programs also show promising results. For instance, previous reviews have showed that methadone maintenance treatment (MMT) minimises HIV-related risk behaviours, reduces drug-related criminal activities, and improves social functioning among PWID [4]. Moreover, needle exchange programs (NEP) are effective in reducing the borrowing and lending of used syringes, thus reducing the incidence of blood-borne diseases while serving as a gateway to engage difficult-to-reach individuals in services [5]. However, these programs continue to face challenges, such as discrimination against PWID, low coverage among PWID, and lack of law enforcement and community support [6]. As a result, PWID remain medically underserved and lack access to essential healthcare services [7].

Stigma has been identified as an important barrier to care for PWID, leading to poorer health outcomes [8]. PWID were less likely to receive a routine physical examination than the general population [9]. Literature showed that there was a pervasive stigma among PWID, resulting in their avoidance of utilising NEP in the community due to fear of recognition and stigma associated with injection drug use [10]. Some PWID fear that accepting the need for harm reduction programs will lead to greater stigma associated with being labelled as a “drug addict” [11]. Even when services are accessed, stigma may also hinder provider-patient communication and prevent individuals from disclosing their drug use problems to healthcare providers, the very issue for which they may need the greatest need of care [8], leading to compromised diagnosis and treatment management [12]. Stigma is commonly identified as possessing “an attribute that is deeply discrediting” and it marks the person as different from the rest of the community, or its understanding of normalcy [13]. Study assessing stigma falls broadly into two categories, perceived stigma and internalised stigma [14]. Perceived stigma, also labelled as felt stigma, refers to an individual’s expectations about the probability that stigma will be enacted in different situations [15]. Internalised shame refers to an individual’s acceptance of stigma as his or her own self-concept [15]. Internalised shame differs from perceived stigma in that the latter is about one’s awareness of social norms and expectations that stigma will be enacted, yet it does not necessarily mean that an individual believes that it is justified.

There is a growing problem of injection drug use in Vietnam [1,12]. Since the early 1990s, the Vietnamese government publically designated drug use as a “social evil” to be eradicated through punitive means, resulting in many PWID being forcefully detained in detoxification centres for extended periods and leading to stigmatisation of drug use [16]. Previous research has shown pervasive stigmatisation and discrimination against PWID in Vietnam [17]. A recent study on male PWID released within the past two years from compulsory detainment at detoxification centres found that persistent stigma and discrimination hindered

employment, increased participants' social isolation, and exacerbated their struggles with addictions [18]. Literature showed that even MMT patients in rural Vietnam perceived high levels of stigma, which were associated with unemployment, mental health disorders and HIV infection [19]. Drug-related stigma is often layered on top of pre-existing stigma, such as HIV stigma [14,17]. Studies showed that the persistent drug-related stigmatisation layered with HIV stigma in Vietnam prevented HIV-infected PWID from disclosing their status and seeking help [17,18].

In response to the growing problem of injection drug use in the country, the Vietnamese government launched pilot harm reduction programs focusing on MMT and NEP [20]. By 2012, 88% of the provinces and cities in Vietnam had implemented NEP and 61 MMT clinics provide treatment in 20 cities and provinces across the country [21]. However, these programs are facing challenges such as lack of adequate training for physicians and the effects of stigma and discrimination [22]. While the government of Vietnam has since moved from an approach based mostly on law enforcement towards an increasingly critical role for harm reduction since 2006 [22], stigma against PWID persists and continues to be one of the major barriers that impede care and harm reduction programs in the country [23]. Despite the well-documented need for quality services among PWID worldwide [6], there is a paucity of research addressing the health effects of stigmatisation among PWID in Vietnam. To fill the gaps and to mitigate barriers to accessing services, this study aimed to understand how drug-related stigma affects PWID's access to care and utilisation of harm reduction programs (i.e. MMT and NEP) in Vietnam to inform future development of targeted intervention strategies in the country.

METHODS

Participants and Recruitment

The study used cross-sectional baseline data from a randomised controlled trial conducted in Phú Thọ and Vinh Phúc Provinces of Vietnam. The purpose of the intervention trail was to enhance the role of commune health workers in HIV and drug use prevention and treatment for PWID in Vietnam. Communes with 20 or more registered PWID were eligible to be included in this study to ensure enough caseload at each commune, resulting in a total of 60 communes randomly selected from Phú Thọ and Vinh Phúc Provinces. We recruited 15 PWID from each of the 60 participating commune health centres (CHC). In Vietnam, service providers in the local CHCs provide curative and preventive health services, such as referrals for HIV testing, counselling and preventive education to PWID in the community [24]. Recruitment information was communicated verbally and with printed flyers posted in the local CHCs where PWID regularly received health services. The flyer described the project as a "Health Service Study" and provided a phone number so that potential participants could either call for more information or meet with a project recruiter at the centre. A project recruiter met with prospective PWID individually to screen for eligibility. The project recruiters provided full disclosure of the study procedures, explained the study purpose, ensured voluntary participation, confidentiality issues, and potential risks and benefits following a standardised script. The recruiters informed prospective participants about their right to withdraw at any time during the research. To be included in the study, participants

needed to: (i) be 18 years or older; (ii) have a history of injection drug use; and (iii) reside in the study area. The refusal rate was less than 5%. We collected baseline data from October 2014 to February 2015. Ethical approval was granted by the Institutional Review Boards at University of California, Los Angeles and the National Institute of Hygiene and Epidemiology in Vietnam.

Data Collection

Following informed consent, participants completed baseline survey using Audio Computer-Assisted Self-Interview that allowed them to directly input their answers to the pre-programmed computer database. Our project staff were on standby to provide clarification or instructions for using Audio Computer-Assisted Self-Interview. This tool aimed to provide confidentiality and reduce social desirability during the assessment. The approximate duration of the survey was about 45 to 60 minutes. All participants received 80,000 Vietnam đồng (VND, equivalent to 4 USD) for their time and participation.

Measures

During the survey, PWID were asked for demographic information, including gender, age, educational attainment, marital status and annual family income. Additionally, use of harm reduction programs was assessed by asking the participants two separate questions: “have you ever been under MMT” and “have you ever used NEP”. Responses were recorded as “yes” or ‘no”. Several multi-item scales were used in the study to measure access to care and drug-related stigma. To achieve culturally appropriate translation, the “forward–backward” translation procedure was utilised [25]. We worked with the Vietnam research team to verify and ensure the accuracy of the questionnaire translation. Any mismatches were discussed until agreement was reached. Finally, the provisional version of the translated questionnaire was pilot tested in Vietnam to assess the feasibility and clarity of the items and response categories.

Access to care scale was adapted from an instrument previously administered to people living with HIV in Thailand [26]. The scale consisted of seven items created into a single composite variable as a proxy for access to care and was modified for cultural relevance in this current study. Access to care is conceptualised as a product of multiple factors, including not only the availability of services, but also knowledge, attitude, skills and self-care practices [27]. PWID were asked whether they believed the following statements applied to them: (i) “you have regular visits to your doctors or medical providers”; (ii) “if you get sick, you know where to go to get treatment”; (iii) “if you need more information about your illness, you know where to get them”; (iv) “you know when to go for your regular check-up when you are not sick”; (v) “you know how to protect yourself from getting sick”; (vi) “you can talk freely to your doctor and other medical providers about your illness”; and (vii) “you take vitamins or supplements regularly in order to stay healthy”. The responses were recorded as 0 being “No” and 1 being “Yes”. A summative composite score was created with higher score indicating a higher level of access to care. The scale had a Cronbach’s alpha of 0.72, supporting its internal consistency reliability.

Drug-related stigma was assessed using a 17-item instrument, including two subscales: *perceived stigma* and *internalised shame*. The Perceived Stigma of Addiction Scale is an 8-item measure [28], adapted from the Perceived Devaluation and Discrimination Questionnaire to measure perceived stigma toward serious mental illness [29]. The Perceived Stigma of Addiction Scale measures stigma as perceived by substance users and has been found to have adequate internal consistency ($\alpha = 0.73$). In this current study, the questionnaire asked participants to indicate the degree of their agreement or disagreement with statements regarding feelings that people sometimes have about drug use, such as "most people think less of a person who has been in treatment for substance use". In addition to the first eight items in the Perceived Stigma of Addiction Scale, the subscale *internalised shame* was adapted for use with participants reporting substance use problems from a measure of internalised shame in people living with HIV/AIDS [30]. For instance, participants were asked the degree they agreed with the statement, "your life is filled with shame." Table 1 presents the list of items in the *drug-related stigma* instrument. Response categories ranged from (1) "strongly disagree" to (5) "strongly agree." A total score was created to represent the sum of endorsed items, scores ranged from 17 to 85, with higher score implying a higher degree of drug-related stigma. The drug-related stigma scale was internally consistent, Cronbach's alpha, $\alpha = 0.85$.

Data Analysis

We first examined the frequency distributions of PWID demographics and other measures of interest. We then calculated Pearson's correlation coefficients to examine the relationship between drug-related stigma, access to care, use of MMT, NEP, as well as continuous demographic variables such as age, family annual income and years of education. We constructed linear multiple regression models to assess the relationship between drug-related stigma and access to care, simultaneously controlling for the participants' demographic characteristics. Similarly, we carried out logistic regression models to assess the relationship between drug-related stigma and use of MMT and NEP, respectively, while controlling for the same demographic variables. Regression coefficients estimation and their significant levels were reported for linear multiple regression models; odds ratios and their *P* value were presented for logistic regression analyses. All analyses were performed using SAS software version 9.4 (SAS Institute, Cary, NC, USA).

RESULTS

Sample Characteristics

Table 2 presents the demographic characteristics and the outcome measures of the respondents. A total of 900 PWID participated in this study; 97.9% were male with a mean age of 36.8 years (SD = 8.0; ranged from 18 to 65 years), which was consistent with the demographics of the PWID in Vietnam (95% male) [31]. The majority (72.4%) of the participants were married or living as married. The average annual family income was 77,130,782 VND (equivalent to 3459 USD). Most participants (95.2%) received basic education, including five years of primary education, four years of intermediate education, and three years of secondary education. Furthermore, the mean scores of *drug-related stigma* and *access to care* were 58.5 (SD = 8.8) and 5.2 (SD = 1.5), respectively. More than half of

the participants reported possessing the stigmatising beliefs listed in the stigma scale, with the exception of the item “you feel your life is worthless” (44.1% of the participants agreed to this statement), indicating high levels of drug-related stigma among the participants. At baseline, 16.9% (n = 152) of the PWID was HIV-positive, of whom 83.9% were currently on antiretroviral therapy. Twenty-nine and 20 percent of the PWID had ever used MMT and NET, respectively, while 27.4% was currently under MMT.

The correlation coefficients among demographic characteristics, drug-related stigma, access to care, MMT and NEP are shown in Table 3. Significant negative correlations were observed among access to care and drug-related stigma ($r = -0.14$, $P < 0.001$). Positive correlations with access to care were also found between age and being married ($r = 0.10$, $P = 0.004$; $r = 0.09$, $P = 0.008$, respectively). Previous utilisation of harm reduction programs, that is, ever been under MMT and NEP, were positively correlated with access to care ($r = 0.25$, $P < 0.001$; $r = 0.10$, $P = 0.002$, respectively). Family annual income was negatively correlated with levels of drug-related stigma ($r = -0.07$, $P = 0.027$) while years of education was positively correlated with it ($r = 0.11$, $P = 0.001$). Years of education was positively associated with having ever used MMT and NEP ($r = 0.15$, $P < 0.001$; $r = 0.09$, $P = 0.005$). Ever been under MMT was positively correlated to ever used NEP ($r = 0.10$, $P = 0.003$).

Table 4 shows the regression models examining factors associated with access to care and utilisation of harm reduction programs, including MMT and NEP. Controlling for selected independent variables, higher levels of drug-related stigma was associated with lower levels of access to care (beta (β) = −0.026, $P < 0.0001$). In addition, older age and more years of education were positively associated with higher levels of access to care ($\beta = 0.020$, $P = 0.003$; $\beta = 0.035$, $P = 0.046$, respectively). Having ever used MMT or NEP was not associated with drug-related stigma. Those with more years of education have higher odds of ever used MMT and NEP (odds ratio = 1.13, $P < 0.0001$; odds ratio = 1.08, $P = 0.009$, respectively).

DISCUSSION

The findings of this study suggest that drug-related stigma experienced by PWID could result in lower access to care, leading to public health concerns. For instance, failure to routinely seek preventive care can increase the likelihood of using crisis treatment and care. Research has documented that the barriers to treatment posted by drug-related stigma are similar to ways in which these stressors have been shown to deter treatment seeking for mental illness and HIV/AIDS [32–34]. Moreover, it is critical to note that the level of drug-related stigma perceived by PWID has been shown to persist even when drug use is reduced or ended, which may adversely affect the long-term health of this population [29]. While the study showed an association between drug-related stigma and access to care, research on other stigmatised conditions such as HIV/AIDS and mental illness suggests that there are likely to be other negative consequences of drug-related stigma for PWID [32–33]. The negative consequences were related to compliance with medications, access to social welfare systems, and drug use behaviors [34]. Even when stigma is not directly experienced in healthcare settings, it can take a toll in healthcare utilisation by discouraging people from seeking services [34]. These results suggest that there may be potential benefits of

addressing drug-related stigma in enhancing care access among PWID and deterring the detrimental influence of stigmatisation on mental and physical health stemming from exposure to chronic stress [35]. We also found that age was positively associated with access to care. This finding could be in part explained by the fact that older adults often have increased healthcare needs than younger adults, making accessing healthcare unavoidable to attend to their needs. Similarly, a study conducted among HIV-infected PWID found that younger PWID were less likely to receive antiretroviral therapy [36], suggesting that greater effort should be made to engage young PWID in care services early on.

In this study, drug-related stigma was associated with access to care but not with specific harm reduction programs such as MMT or NEP. The findings implied that drug-related stigma was a critical factor for accessing healthcare in non-drug-related settings where services were provided to a wide range of populations. One possible explanation was that the fear of confidentiality prevented individuals with substance abuse problems from entering and utilising primary care. On the other hand, MMT and NEP provide services to individuals with substance use problems specifically. As a result, PWID may be less concerned about being treated or seen differently from the rest of the clients at harm reduction programs than at primary care facilities. Literature has documented the benefits of altering healthcare delivery paradigm from vertical/stand-alone projects (MMT facilities only provide MMT services) to diagonal/integrative model to address the unmet needs of drug users for medical services [37]. Additionally, the persistent drug-related stigma experienced by PWID may discourage them from getting healthcare due to fear of poor treatment by healthcare providers or fear of getting into troubles with the authorities [16]. Consequently, those who experience more stigma and discrimination may be more likely to drop out of treatment [8]. A recent systematic review found a small body of research that has empirically evaluated interventions targeting drug-related stigma has demonstrated efficacy in reducing drug-related stigma in several Western countries [9]. A study conducted in the US by Luoma *et al.* found that group-based Acceptance and Commitment Therapy resulted in significantly decreased internalised stigma and shame among people with substance use disorders [38]. There could be potential benefits in adopting and pilot testing similar model strategies to reduce drug-related stigma in order to enhance access to and utilisation of harm reduction programs among PWID in other non-Western countries, including Vietnam.

The findings suggested that levels of education were positively correlated with access to care, as well as usage of MMT and NEP. Research on education and access to healthcare suggested that higher levels of education were associated with an increase in the use of preventive care [39]. One possible explanation was that more educated individuals were better informed about healthcare and had a greater ability to understand health information. PWID with lower levels of education may be less aware of the care benefits and less likely to seek care. Therefore, efforts should be directed to make health and harm reduction programs more accessible to PWID with low levels of education, such as using pictures to improve health communication, designing media with simpler illustrations, and communicating in simpler words. Furthermore, literature has shown that activities of peer outreach workers were effective in engaging PWID and increasing access to health interventions in Vietnam [40], targeted efforts should be made to increase the participation in MMT among PWID with lower level of education. Further research is needed to assess

the feasibility and acceptability of targeted harm reduction programs for PWID with low education attainment in Vietnam.

Limitations

Several study limitations should be noted. First, this study utilised a cross-sectional design, so we can not make causality inference or investigate the continuity of MMT/NEP service use. Second, these data were based on self-reports, which were subject to social desirability bias. Third, the study was conducted in two provinces of Vietnam which may limit the generalisability of the results documented. Additionally, the study participants were recruited from CHCs, thus, the results may not be generalisable to individuals who did not receive service from CHC. Moreover, future study would usefully include drug-related stigma measures that are specific to health care settings. Future study would benefit from considering other confounders, such as PWID's knowledge and perceived benefits of MMT and NEP, access to information and peer-educators, which were not considered in this study.

Conclusion

Drug-related stigma continues to be a major obstacle for PWID to access care in Vietnam. Stigmatisation may marginalise PWID's access to services, thus reducing capacity for risk reduction. Interventionists should consider developing strategies to address drug-related stigma to improve PWID's utilisation of care services. Additionally, special efforts should be directed to younger PWID and those with lower levels of education.

Acknowledgments

This work was supported by the National Institute on Drug Abuse/NIH [grant number R01DA033609]. We thank the project team members in Vietnam for their contributions to this study.

References

1. UNODC. World drug report. 2015. Available at: https://www.unodc.org/documents/wdr2015/World_Drug_Report_2015.pdfAccessed Accessed January 11, 2017
2. Degenhardt L, Whiteford HA, Ferrari AJ, et al. Global burden of disease attributable to illicit drug use and dependence: findings from the Global Burden of Disease Study 2013. Lancet. 2013; 382:1564–74. [PubMed: 23993281]
3. Saitz R, Alford DP, Bernstein J, Cheng DM, Samet J, Palfai T. Screening and brief intervention for unhealthy drug use in primary care settings: Randomized clinical trials are needed. J Addict Med. 2010; 4:123–30. [PubMed: 20936079]
4. Sun HM, Li XY, Chow EP, et al. Methadone maintenance treatment programme reduces criminal activity and improves social well-being of drug users in China: a systematic review and meta-analysis. BMJ Open. 2015; 5:e005997.
5. Vlahov D, Robertson AM, Strathdee SA. Prevention of HIV infection among injection drug users in resource-limited settings. Clin Infect Dis. 2010; 50:114–21.
6. Mathers BM, Degenhardt L, Ali H, et al. HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage. Lancet. 2010; 375:1014–28. [PubMed: 20189638]
7. World Health Organization (WHO). Atlas on substance use (2010): Resources for the prevention and treatment of substance use disorders. 2010. Available at: http://www.who.int/substance_abuse/activities/msbatlasexecsum.pdf?ua=1Accessed January 11, 2017

8. Ahern J, Stuber J, Galea S. Stigma, discrimination and the health of illicit drug users. Drug Alcohol Depend. 2007; 88:188–96. [PubMed: 17118578]
9. Livingston JD, Milne T, Fang ML, Amari E. The effectiveness of interventions for reducing stigma related to substance use disorders: a systematic review. Addiction. 2012; 107:39–50.
10. Simmonds L, Coomber R. Injecting drug users: a stigmatised and stigmatising population. Int J Drug Policy. 2009; 20:121–30. [PubMed: 17981451]
11. Lloyd C. The stigmatization of problem drug users: a narrative literature review. Drugs: Educ Prev Policy. 2013; 20:85–95.
12. Institute for Social Development Studies (ISDS). Understanding and challenging stigma toward injecting drug users and HIV in Vietnam. 2011. Available at: http://www.icrw.org/sites/default/files/publications/Toolkit%20for%20action%20-%20Reducing%20stigma%20toward%20drug%20addiction%20and%20HIV%20in%20Vietnam.PDFAccessed 11 January 2017
13. Goffman, E. Stigma: Notes on a spoiled identity. Jenkins, JH & Carpenter; 1963.
14. Nyblade LC. Measuring HIV stigma: existing knowledge and gaps. Psychol Health Med. 2006; 11:335–45. [PubMed: 17130069]
15. Herek GM, Gillis JR, Cogan JC. Internalized stigma among sexual minority adults: Insights from a social psychological perspective. J Counse Psychol. 2009; 56:32.
16. Amon J, Pearshouse R, Cohen J, Schleifer R. Compulsory drug detention centers in China, Cambodia, Vietnam, and Laos: health and human rights abuses. Health Hum Rights. 2013; 15:124–37. [PubMed: 24421160]
17. Rudolph AE, Davis WW, Quan VM, et al. Perceptions of community-and family-level injection drug user (IDU)-and HIV-related stigma, disclosure decisions and experiences with layered stigma among HIV-positive IDUs in Vietnam. AIDS Care. 2012; 24:239–44. [PubMed: 21777075]
18. Tomori C, Go VF, Huong NM, et al. “In their perception we are addicts”: Social vulnerabilities and sources of support for men released from drug treatment centers in Vietnam. Int J Drug Policy. 2014; 25:897–904. [PubMed: 24857185]
19. Van Nguyen H, Nguyen HLT, Mai HT, et al. Stigmatization among methadone maintenance treatment patients in mountainous areas in northern Vietnam. Harm Reduct J. 2017; 14:1. [PubMed: 28056990]
20. Reid G, Higgs P. Vietnam moves forward with harm reduction: an assessment of progress. Glob Public Health. 2011; 6:168–80. [PubMed: 20155544]
21. Giang LM, Ngoc LB, Hoang VH, Mulvey K, Rawson RA. Substance use disorders and HIV in Vietnam since Doi Moi (Renovation): an overview. J Food Drug Anal. 2013; 21:S42–5. [PubMed: 25278736]
22. Nguyen TT, Nguyen LT, Pham MD, Vu HH, Mulvey KP. Methadone maintenance therapy in Vietnam: an overview and scaling-up plan. Adv Prev Med. 2012; 2012:732484. [PubMed: 23227351]
23. Thanh DC, Moland KM, Fylkesnes K. Persisting stigma reduces the utilisation of HIV-related care and support services in Viet Nam. BMC Health Serv Res. 2012; 12:428. [PubMed: 23176584]
24. World Health Organization (WHO). Good practice in Asia: targeted HIV prevention for injecting drug users and sex workers. 2010. Available at: http://iris.wpro.who.int/bitstream/handle/10665.1/1388/9789290614883_eng.pdf;jsessionid=FA059DF30BB9F94566D905F0DC0B97E0?sequence=3Accessed 11 January 2017
25. Brislin RW. Back-translation for cross-cultural research. J Cross Cult Psychol. 1970; 1:185–216.
26. Li L, Lee SJ, Wen Y, Lin C, Wan D, Jiraphongsa C. Antiretroviral therapy adherence among patients living with HIV/AIDS in Thailand. Nurs Health Sci. 2010; 12:212–20. [PubMed: 20602694]
27. Andersen RM. Revisiting the behavioral model and access to medical care: does It matter? J Health So Beha. 1995; 36:1–10.
28. Luoma JB, O’Hair AK, Kohlenberg BS, Hayes SC, Fletcher L. The development and psychometric properties of a new measure of perceived stigma toward substance users. Subst Use Misuse. 2010; 45:47–57. [PubMed: 20025438]

29. Link BG, Struening EL, Rahav M, Phelan JC, Nuttbrock L. On stigma and its consequences: evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. J Health Soc Behav. 1997; 38:177–90. [PubMed: 9212538]
30. Li L, Lee SJ, Thammawijaya P, Jiraphongsa C, Rotheram-Borus MJ. Stigma, social support, and depression among people living with HIV in Thailand. AIDS Care. 2009; 21:1007–13. [PubMed: 20024757]
31. UNODC. Vietnam. 2010. Available at: https://www.unodc.org/docs/treatment/CoPro/Web_Viet_Nam.pdfAccessed 11 January 2017
32. Golberstein E, Eisenberg D, Gollust SE. Perceived stigma and mental health care seeking. Psychiatr Serv. 2008; 59:392–99. [PubMed: 18378838]
33. Kalichman SC, Simbayi LC. HIV testing attitudes, AIDS stigma, and voluntary HIV counselling and testing in a black township in Cape Town, South Africa. Sex Transm Infect. 2003; 79:442–7. [PubMed: 14663117]
34. Rao D, Kekwaletswe TC, Hosek S, Martinez J, Rodriguez F. Stigma and social barriers to medication adherence with urban youth living with HIV. AIDS Care. 2007; 19:28–33. [PubMed: 17129855]
35. Latkin C, Davey-Rothwell M, Yang JY, Crawford N. The relationship between drug user stigma and depression among inner-city drug users in Baltimore, MD. J Urban Health. 2013; 90:147–56. [PubMed: 22918839]
36. Strathdee SA, Palepu A, Cornelisse PG, et al. Barriers to use of free antiretroviral therapy in injection drug users. JAMA. 1998; 280:547–9. [PubMed: 9707146]
37. World Health Organization (WHO). Treatment of injecting drug users with HIV/AIDS: promoting access and optimizing service delivery. Geneva: WHO; 2006. Available at: http://www.who.int/substance_abuse/publications/treatment_idus_hiv_aids.pdfAccessed 11 January 2017
38. Luoma JB, Kohlenberg BS, Hayes SC, Bunting K, Rye AK. Reducing self-stigma in substance abuse through acceptance and commitment therapy: Model, manual development, and pilot outcomes. Addict Res Theory. 2008; 16:149–65. [PubMed: 27746709]
39. Fletcher JM, Frisvold DE. Higher education and health investments: does more schooling affect preventive health care use? J Hum Cap. 2009; 3:144–76. [PubMed: 22368727]
40. Walsh N, Gibbie TM, Higgs P. The development of peer educator-based harm reduction programmes in Northern Vietnam. Drug Alcohol Rev. 2008; 27:200–3. [PubMed: 18264883]

Table 1

Items in drug-related stigma measure

Perceived drug-related stigma
1. Most people would willingly accept someone who has been treated for substance use as a close friend (R)
2. Most people believe that someone who has been treated for substance use is just as trustworthy as the average citizens (R)
3. Most people would accept someone who has been treated for substance use as a teacher of young children in a public school (R)
4. Most people would hire someone who has been treated for substance use to take care of their children (R)
5. Most people think less of a person who has been in treatment for substance use
6. Most employers will hire someone who has been treated for substance use if he or she is qualified for the job (R)
7. Most employers will pass over the application of someone who has been treated for substance use for another applicant
8. Most people would be willing to date someone how has been treated for substance use (R)
Internalised drug-related shame
9. You are punished by evil *
10. Your life is tainted
11. You are angry with yourself as a drug user
12. You are a disgrace to the society
13. Your life is filled with shame
14. You fill guilty for being the source of disruption in the family
15. You feel your life is worthless
16. You feel your reputation is lost
17. If possible, you want to conceal your drug status for life

Note. (R) indicated that the item was reversed coded.

*Self-stigmatisation as people consider drug-related stigma a punishment for their behaviour.

Table 2

Characteristics of study participants ($N = 900$)

Characteristics	Count	(%)
Gender		
Male	881	97.9
Female	19	2.1
Age, years		
Mean (SD)	36.8	8.0
18 – 30	211	25.6
31 – 35	171	20.7
36 – 40	159	19.3
41+	284	34.4
Marital status		
Married or living as married	652	72.4
Not married	248	27.6
Family annual income (VND)		
Mean (SD)	77,130,782	114,113,852
Less than 30,000,000	257	28.7
30,000,001–50,000,000	227	25.3
50,000,001–80,000,000	220	24.6
More than 80,000,000	192	21.4
Education		
Mean (SD)	9.8	3.0
Less than primary education	42	4.7
Completed basic education	778	86.5
Greater than basic education	79	8.8
Harm reduction programs usage		
Ever used MMT	264	29.3
Ever used NEP	180	20.0
Ever used MMT and NEP	69	7.7
Access to care (M ± SD)	5.2	1.5
Drug-related stigma (M ± SD)	58.5	8.8

MMT, methadone maintenance therapy; NEP, needle exchange program.

Table 3

Correlation coefficients and significance levels among selected variables ($N = 900$)

	1	2	3	4	5	6	7
1. Access to care							
2. Age	0.10**						
3. Married	0.09**	0.29**					
4. Family annual income	0.04	−0.08*	0.05				
5. Years of education	0.02	−0.22**	−0.13**	0.03			
6. MMT	0.25**	−0.02	−0.07*	−0.02	0.15**		
7. NEP	0.10**	−0.01	−0.06	−0.01	0.09**	0.10**	
8. Drug-related stigma	−0.14**	0.06	−0.04	−0.07*	0.11**	−0.02	0.02

*$P < 0.05$;

**$P < 0.01$.

MMT, methadone maintenance treatment; NEP, needle exchange program.

Drug Alcohol Rev. Author manuscript; available in PMC 2019 March 01.

Table 4

Multiple regressions on access to care and logistic models of harm reduction programs usage ($N = 900$).

	Access to care		MMT		NEP	
	β	***P* value**	**OR**	***P* value**	**OR**	***P* value**
Age	0.020	0.003	1.010	0.330	1.010	0.370
Married	0.201	0.093	0.746	0.086	0.770	0.173
Family annual income *	0.003	0.558	0.989	0.156	0.998	0.803
Years of education	0.035	0.046	1.130	<.0001	1.081	0. 009
Drug-related stigma	−0.026	<0.0001	0.988	0.163	1.001	0.949

Note. β = beta coefficient; MMT, methadone maintenance treatment; NEP, needle exchange program; OR, odds ratio.

* family annual income per 10,000,000 VND for ease of interpreting coefficient.