

Difficulty accessing syringes and syringe borrowing among injection drug users in Bangkok, Thailand

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Abstract

Introduction and Aims. Thailand's longstanding HIV epidemic among injection drug users (IDU) has been attributed, in part, to the Thai government's unwillingness to implement evidence-based HIV prevention interventions. This study was undertaken to examine risk factors for syringe borrowing among a community-recruited sample of Thai IDU. **Design and Methods.** We examined the prevalence of syringe borrowing among 238 IDU participating in the Mit Sampan Community Research Project, Bangkok. Multivariate logistic regression was used to identify independent predictors of syringe borrowing in the past 6 months. **Results.** A total of 238 IDU participated in this study; 66 (26.2%) were female, and the median age was 36.5 years. In total, 72 (30.3%) participants reported borrowing a used syringe in the past 6 months, with 47 (65.3%) of these individuals reporting multiple borrowing events. In multivariate analyses, syringe borrowing was positively associated with difficulty accessing syringes [adjusted odds ratio (AOR) = 2.46; 95% confidence interval (CI): 1.08–5.60] and injecting with other people on a frequent basis (AOR = 3.17; 95% CI: 1.73–5.83). Primary reasons offered for experiencing difficulty accessing syringes included being too far from syringe outlets (34.1%), pharmacies being closed (13.6%) and being refused syringes at pharmacies (9.1%). **Discussion and Conclusions.** We observed an alarmingly high rate of syringe borrowing among a community-recruited sample of Thai IDU. Various lines of evidence indicate that poor access to sterile syringes is driving the high rate of syringe borrowing observed in this study. Immediate action should be taken to increase access to sterile syringes among Thai IDU. [Kerr T, Fairbairn N, Hayashi K, Suwannawong P, Kaplan K, Zhang R, Wood E. Difficulty accessing syringes and syringe borrowing among injection drug users in Bangkok, Thailand. *Drug Alcohol Rev* 2010;29;157–161]

Key words: syringe sharing, Thailand, injection drug use, HIV/AIDS, HIV.

Introduction

Illicit injection drug use continues to be associated with severe harms, including the perpetuation of the global HIV epidemic. Close to one-third of all new HIV infections outside of sub-Saharan Africa are attributed to injection drug use, and in Eastern Europe and Central Asia the sharing of injecting equipment accounts for more than 80% of all new HIV infections [1]. Although a large body of scientific evidence supports the application of HIV prevention measures, such as needle exchange programs (NEPs), these programs remain

highly controversial, and coverage of such programs remains low [2]. For instance, a recent report by the Global HIV Prevention Working Group estimates that only 8% of people who inject drugs (IDU) globally have access to evidence-based HIV prevention services—the lowest rate of access for any group highly vulnerable to HIV/AIDS [3]. Alternatively, policies which have been shown to contribute to HIV risk among IDU, such as the arrest and incarceration of drug users [4], continue to receive substantial support [5].

Thailand has been the site of a longstanding HIV epidemic among IDU, with HIV prevalence among

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IDU remaining in the range of 40–50% [6,7]. Although Thai authorities have received accolades for their efforts to reduce to the sexual transmission of HIV through the ‘100% condom use’ campaign [8], the country has been criticised for failing to implement HIV prevention interventions for IDU, including needle distribution programs [9]. In light of the ongoing epidemiological questions regarding the possible link between sterile syringe access and syringe sharing among IDU in Thailand, we undertook this study to examine the context of syringe sharing among Thai IDU.

Methods

Participant recruitment

The Mit Sampan Community Research Project (MSCRP) is a collaborative research project involving the British Columbia Centre for Excellence in HIV/AIDS (Vancouver, Canada), the Mit Sampan Harm Reduction Center (Bangkok, Thailand), the Thai AIDS Treatment Action Group (Bangkok, Thailand) and Chulalongkorn University (Bangkok, Thailand). During July–August 2008, the research partners designed and undertook a cross-sectional study involving 238 community-recruited IDU. Potential participants were recruited through peer-based outreach efforts and word of mouth. Study participants were invited to attend the Mit Sampan Harm Reduction Center to participate in the study. All participants provided informed consent and completed an interviewer-administered questionnaire eliciting demographic data as well as information about drug use, HIV risk behaviour, interactions with police and the criminal justice system, and experiences with health care. All participants were given a stipend of 250 Baht (approximately \$US7) upon completion of the questionnaire. The study has been approved by the Research Ethics Boards of the University of British Columbia and Chulalongkorn University.

Statistical analyses

The primary outcome of interest in this analysis was self-reported syringe borrowing among IDU in the past 6 months. IDU was defined as reporting a lifetime history of injection drug use. We compared IDU who reported syringe borrowing in the past 6 months with those who did not using univariate statistics and multivariate logistic regression. Variables considered included: median age, sex, education level (<secondary school vs. \geq secondary school), daily heroin injection (yes vs. no), daily methamphetamine injection (yes vs. no), daily midazolam injection (yes vs. no), binge drug use (yes vs. no), use of drugs in combination (yes vs.

no), difficulty accessing syringes (yes vs. no), injecting with others (<25% of injections vs. \geq 25% of injections), sex trade involvement (yes vs. no), addiction treatment use (yes vs. no) and increased police presence where drugs are obtained (yes vs. no). We chose to distinguish between individuals who performed <25% or \geq 25% of their injections with others in an effort to denote those who frequently and infrequently inject with others. Because it is well known that syringe sharing is prevalent in Thai prisons [10,11], we elected to restrict our analyses to factors that could potentially predict syringe borrowing within community settings and excluded all within-prison sharing events. All behavioural variables refer to the 6 month period prior to the interview. To examine the bivariate associations between each independent variable and syringe borrowing, we used the Pearson χ^2 -test. Fisher’s exact test was used when one or more of the cells contained values less than or equal to five. We then applied an a priori defined statistical protocol that examined the independent effect of syringe borrowing by fitting a multivariate logistic regression model that included all variables that were significantly associated with syringe borrowing at the $P \leq 0.05$ level in univariate analyses. All P values were two-sided. We also asked participants to indicate reasons for reporting difficulty accessing sterile syringes based on a list of possible responses. Responses not included on the list were recorded manually.

Results

In total, 238 IDU participated in this study, including 66 (26.2%) women. The median age was 36.5 years. In total, 72 (30.3%) participants reported borrowing a used syringe in the past 6 months. Among these individuals, 25 (34.7%) reported borrowing a used syringe once in the past 6 months, while 44 (61.1%) reported between two and 10 borrowing events during the same period. Four (5.5%) individuals reported more than 10 borrowing events during the previous 6 months.

Table 1 presents the univariate analyses of factors associated with syringe borrowing. As shown here, syringe borrowing was associated with: difficulty accessing syringes [odds ratio (OR) = 2.65; 95% confidence interval (CI): 1.22–5.77], use of drugs in combination (OR = 2.22, 95% CI: 1.14–4.33) and injecting with others (OR = 3.69, 95% CI: 2.06–6.60). Table 2 presents the multivariate analyses of factors independently associated with syringe borrowing. As shown here, syringe borrowing was positively associated with difficulty accessing syringes [adjusted odds ratio (AOR) = 2.46; 95% CI: 1.08–5.60] and injecting with others (AOR = 3.17; 95% CI: 1.73–5.83). Primary reasons offered for experiencing difficulty accessing

Table 1. Factors associated with syringe borrowing among Thai injection drug users (n = 238)

Characteristic	Yes ^a n (%) n = 72	No n (%) n = 166	Odds ratio (95% confidence interval)	P value
Median age				
>36.5 years	35 (49)	85 (51)	0.90 (0.52–1.57)	0.713
(36.5 years)	37 (51)	81 (49)		
Sex				
Female	13 (18)	48 (29)	0.54 (0.27–1.08)	0.078
Male	59 (82)	118 (71)		
Education level				
<secondary school	24 (33)	65 (39)	0.78 (0.43–1.39)	0.394
(secondary school)	48 (67)	101 (61)		
Heroin injection				
<daily	41 (57)	91 (55)	1.09 (0.62–1.90)	0.762
(daily)	31 (43)	75 (45)		
Methamphetamine injection				
<daily	23 (32)	36 (22)	1.70 (0.91–3.14)	0.092
(daily)	49 (68)	130 (78)		
Midazolam injection				
<daily	42 (58)	82 (49)	1.43 (0.82–2.51)	0.205
(daily)	30 (42)	84 (51)		
Binge drug use				
Yes	35 (49)	61 (37)	1.63 (0.93–2.85)	0.087
No	37 (51)	105 (63)		
Combination drug use				
Yes	58 (81)	108 (65)	3.69 (2.06–6.60)	<0.001
No	14 (19)	58 (35)		
Inject with others				
≥25% of injections	40 (56)	42 (25)	6.10 (2.50–14.93)	<0.001
<25% of injections	32 (44)	124 (75)		
Increased police presence ^b				
Yes	19 (26)	41 (25)	1.09 (0.58–2.06)	0.783
No	53 (74)	125 (75)		
Enrolled in addiction treatment				
Yes	34 (47)	77 (46)	1.03 (0.59–1.80)	0.905
No	38 (53)	89 (54)		
Difficulty accessing syringes				
Yes	15 (21)	15 (9)	2.65 (1.22–5.77)	0.012
No	57 (79)	151 (91)		

^aRefers to individuals who reported ‘yes’ in response to a question asking about syringe borrowing in the past 6 months. ^bRefers to noticing increased police presence where drugs are obtained.

syringes included being too far from syringe outlets (34.1%), pharmacies being closed (13.6%) and being refused syringes at pharmacies (9.1%).

Discussion

We found an alarmingly high rate of recent syringe borrowing among a community-recruited sample of IDU in Bangkok, with 30% of participants reporting syringe borrowing in the previous 6 months. In multivariate analyses, after extensive covariate adjustment, difficulty accessing syringes and injecting with others on a frequent basis were positively associated with syringe borrowing. In a sub-analysis, the primary reasons given for experiencing difficulty in accessing syringes included

being too far from syringe outlets and syringe outlets being closed. It is also notable that 9% of participants reported being refused sterile syringes at pharmacies.

Our findings are consistent with previous studies reporting high rates of syringe sharing among IDU in Thailand [12,13], as well as studies indicating that syringe sharing is a strong predictor of HIV infection among Thai IDU [14–16]. However, it should be noted that while the rate noted in this study is considerably higher than has been observed in other settings [17,18], this rate is lower than has been observed in other studies involving Thai IDU [12,13]. A recent qualitative study of IDU in southern Thailand also pointed to the ‘situational unavailability of needles’ as a primary reason for ongoing syringe sharing [19], and our study

Table 2. Multivariate logistic regression analysis of factors associated with syringe borrowing among Thai IDU (n = 238)

Variable	Adjusted odds ratio (AOR)	95% confidence interval	P value
Combination drug use (yes vs. no)	1.65	(0.81–3.37)	0.164
Inject with others ^a (yes vs. no)	3.17	(1.73–5.83)	<0.001
Difficulty accessing syringes (yes vs. no)	2.46	(1.10–5.59)	0.032

^aRefers to injecting with others for $\geq 25\%$ of all injections.

is among the first to provide epidemiological evidence to support this qualitative finding. While it is known that Thai IDU can access sterile syringes through pharmacies and a small number of health programs serving IDU [19], our results suggest that, in the absence of conventional NEPs, this method of syringe provision is highly inadequate. Further, our data suggest that a significant proportion of IDU are experiencing discrimination by some pharmacies that deny IDU access to syringes.

We also found that IDU who injected with others on a frequent basis were much more likely to report syringe sharing. This finding is consistent with a large number of studies from around the world pointing to the role of social interaction and related dynamics in shaping HIV risk behaviour among IDU [20–22]. The aforementioned qualitative study involving IDU in southern Thailand found that various interpersonal factors, including misconceptions about asymptomatic HIV-positive IDU, selective sharing within social networks, fear of rejection and perceived norms regarding serial needle use, were among the factors that perpetuated syringe sharing among IDU [19]. Although our study does not provide direct insight into the dynamics surrounding syringe borrowing among IDU who inject with others, these findings, when considered alongside other studies, point to the need for health education efforts to target individual misconceptions as well as social network interventions to reduce syringe sharing with groups [19,23,24].

The findings of this study reinforce previous calls for the rapid implementation of low-threshold NEPs in Thailand [25,26]. Given the persistently high rate of HIV infection among Thai IDU and the evidence supporting the effectiveness of NEPs [27,28], it is clear that urgent action to ensure adequate access to sterile syringes in Thailand is needed. Indeed, previous pilot

studies of NEPs in Thailand have indicated that such programs are feasible and well-accepted by Thai IDU [29].

This study has several limitations. First, the study sample was not randomly selected, and so the findings presented herein may not generalise to other Thai IDU. Further, given that health authorities in Bangkok deliver services to IDU that are not available elsewhere in Thailand, our findings may not generalise well to other settings within the country. Second, the study relied primarily on self-report, and therefore the results could be susceptible to socially desirable reporting. Finally, our study is cross-sectional in nature and therefore causation cannot be inferred.

In the present study, we observed an alarmingly high rate of syringe borrowing among a community-recruited sample of Thai IDU. Various lines of evidence indicate that poor access to sterile syringes is driving the high rate of syringe borrowing observed in this study. Immediate action should be taken to increase access to sterile syringes among Thai IDU.

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