POLICING AND PUBLIC HEALTH:
EXPERIENCES OF PEOPLE WHO INJECT DRUGS IN BANGKOK, THAILAND

by

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ABSTRACT

Background: In recent years, Thailand has intensified policing efforts as a strategy to address a continuing epidemic of illicit drug use. Thailand’s “war on drugs” campaign of 2003 received international criticism due to extensive human rights violations. However, few studies have since investigated the impacts of drug policing on people who inject drugs (IDU) in this setting. Drawing on the Risk Environment Framework, this dissertation sought to: explore IDUs’ lived experiences with police; identify the prevalence and correlates of experiencing beatings and drug testing by police; examine the relationship between exposures to policing and syringe sharing; and assess changes in the availability of illicit drugs among IDU in Bangkok, Thailand.

Methods: Between June 2009 and June 2012, a community-recruited sample of IDU in Bangkok participated in a serial cross-sectional mixed-methods study and completed interviewer-administered questionnaires and semi-structured in-depth interviews. Audio-recorded interviews were transcribed verbatim and a thematic analysis was conducted to document the character of IDUs’ encounters with police. A variety of multivariate regression techniques were used to estimate independent relationships between exposures to specific policing tactics and indicators of drug-related harm, as well as to examine a temporal trend of street-level availability of illicit drugs.

Results: Respondents’ narratives indicated that drug policing involved numerous forms of human rights infringements and negatively influenced healthcare access among IDU in Bangkok. Reports of beatings and drug testing by police were common (38% and 67%, respectively) and were independently associated with various indicators of drug-related harm, including syringe sharing and barriers to
healthcare. Street-level availability of illicit drugs increased significantly between 2009 and 2011.

**Conclusions:** The findings indicate that the over-reliance on repressive drug policing is not suppressing the illegal drug market and is instead contributing to police-perpetrated abuses, the perpetuation of risky injection behaviour, and an impediment to healthcare among IDU in Bangkok. These findings raise concern about the ongoing policing practices and point to the need for providing greater police oversight, as well as a shift toward more balanced approaches to drug control in this setting.
PREFACE

This statement certifies that all of the work presented henceforth was conceived, undertaken, and written by the author, Kanna Hayashi (KH). All empirical research conducted for this dissertation was approved by the research ethics boards at Chulalongkorn University (certificate COA 085/2009 and COA 093/2011) and the University of British Columbia/Providence Health Care (certificate H08-00702 and H11-00581). The co-authors of the manuscripts, including Dr. Thomas Kerr (TK), Dr. Jane Buxton (JB), Dr. Joanne Csete (JC), Dr. Evan Wood (EW), Ms. Karyn Kaplan (KK), Mr. Paisan Suwannawong (PS), Ms. Lianping Ti (LT), Dr. Bohdan Nosyk (BN), Dr. Will Small (WS), and Ms. Sattara Hattirat (SH) made contributions only as is commensurate with supervisory committee, collegial, or co-investigator duties. The principal investigator (TK) of the Mitsampan Community Research Project, from which all empirical analyses were derived, has access to all of the data and as corresponding author takes full responsibility for the integrity of the results and the accuracy of the analyses. Relative contributions of the author, collaborators, and co-authors are described in detail below.

Chapters 1, 2, and 8 are original, unpublished intellectual products of the author. With substantive guidance and input from co-supervisors (TK and JB) and a supervisory committee member (JC), KH searched and reviewed all of the literature presented, designed the research, and synthesized the findings of all chapters.

A version of Chapter 3 is currently under review for peer-reviewed publication: Hayashi K, Small W, Csete J, Hattirat S, Kerr T. “Help with the nation”: a qualitative study of experiences with drug policing among people who inject drugs in Bangkok, Thailand. WS, TK, and KH designed the study and trained two interviewers. KH oversaw the data collection process, managed the data, took a primary role in analyzing the data, and prepared the first draft of the manuscript.
WS, TK, JC, and SH provided input to the draft and contributed to the revision of the manuscript.

A version of Chapter 4 has been published: Hayashi K, Ti L, Csete J, Kaplan K, Suwannawong P, Wood E, Kerr T. Reports of police beating and associated harms among people who inject drugs in Bangkok, Thailand: a serial cross-sectional study. *BMC Public Health*. 2013;13(1):733. TK and KH designed the study. KH trained interviewers, oversaw the data collection process, managed the data, conducted the statistical analyses, and prepared the first draft of the manuscript. LT, JC, KK, PS, EW, and TK provided input to the draft and contributed to the revision of the manuscript.

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A version of Chapter 6 has been published and is reused here with kind permission from Springer Science and Business Media: Hayashi K, Ti L, Buxton J, Kaplan K, Suwannawong P, Kerr T. The effect of exposures to policing on syringe sharing among people who inject drugs in Bangkok, Thailand. *AIDS and Behavior*, 2013 Jun 25. [Epub ahead of print]. TK and KH designed the study. KH trained interviewers, oversaw the data collection process, managed the data, conducted the statistical analyses, and prepared the first draft of the manuscript. LT, JB, KK, PS, and TK provided input to the draft and contributed to the revision of the manuscript.
A version of Chapter 7 has been published and is reused here with kind permission from Elsevier: Hayashi K, Nosyk B, Ti L, Suwannawong P, Kaplan K, Wood E, Kerr T. Increasing availability of illicit drugs among people who inject drugs in Bangkok, Thailand. Drug and Alcohol Dependence. 2013;132(1-2):251-256. BN, TK, and KH designed the study. KH trained interviewers, oversaw the data collection process, managed the data, conducted the statistical analyses, and prepared the first draft of the manuscript. BN, LT, PS, KK, EW, and TK provided input to the draft and contributed to the revision of the manuscript. The material presented in this dissertation was prepared by KH, following comments from the journal editor and external peer reviewers.
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<table>
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<tbody>
<tr>
<td>AIC</td>
<td>Akaike Information Criterion</td>
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<tr>
<td>ART</td>
<td>Antiretroviral therapy</td>
</tr>
<tr>
<td>ASEAN</td>
<td>The Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>ATS</td>
<td>Amphetamine-type stimulants</td>
</tr>
<tr>
<td>CAT</td>
<td>Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment</td>
</tr>
<tr>
<td>CESC R</td>
<td>The Committee on Economic, Social and Cultural Rights</td>
</tr>
<tr>
<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
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<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<tr>
<td>HCV</td>
<td>Hepatitis C virus</td>
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<tr>
<td>ICCPR</td>
<td>International Covenant on Civil and Political Rights</td>
</tr>
<tr>
<td>ICESCR</td>
<td>International Covenant on Economic, Social and Cultural Rights</td>
</tr>
<tr>
<td>IDU</td>
<td>People who inject drugs</td>
</tr>
<tr>
<td>NSPs</td>
<td>Needle and syringe programs</td>
</tr>
<tr>
<td>ONCB</td>
<td>Office of the Narcotics Control Board of Thailand</td>
</tr>
<tr>
<td>UDHR</td>
<td>Universal Declaration of Human Rights</td>
</tr>
<tr>
<td>UN</td>
<td>The United Nations</td>
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<tr>
<td>UNODC</td>
<td>United Nations Office on Drugs and Crime</td>
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<td>WHO</td>
<td>World Health Organization</td>
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CHAPTER 1: INTRODUCTION

1.1 Global Response to Illicit Drug Use

Illicit drug use, particularly injection drug use, is associated with an array of health and social harm for individuals and communities. In 2010, the United Nations Office on Drugs and Crime (UNODC) estimated that globally, 153–300 million people (3.4–6.6% of the population aged 15–64 years) had used illicit drugs at least once in the previous year, and that approximately one in every 100 deaths among adults was attributed to illicit drug use.\(^1\) In 2008, globally, an estimated 16 million people injected drugs, and 3 million (19%) of them were estimated to be living with human immunodeficiency virus (HIV).\(^2\) Around the world, millions of people who inject drugs (IDU)\(^3\) suffer from high rates of preventable morbidity and mortality, which are largely attributable to HIV and hepatitis C virus (HCV) infections, and overdoses.\(^2\) In addition to epidemics of infectious disease, untreated drug addiction also inflicts a great deal of economic and social harm on communities, including productivity loss and excessive healthcare costs.\(^5,6\)

Traditionally, the dominant societal response to illicit drug use has been the enforcement of repressive drug laws.\(^7\) This tendency results from the fact that strategies to address illicit drug use are largely governed by three international treaties which most nations have ratified: the 1961 Single Convention on Narcotic Drugs, the 1971 Convention on Psychotropic Substances, and the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. These treaties emphasize the use of criminal sanctions for reducing the illicit use and supply of

\(^1\) Throughout this dissertation, I use the acronym “IDU” when referring to “people who inject drugs.” The term “IDU” is widely used in academic publications to refer to “injection drug users.” However, as this term fails to affirm the personhood of this group of people, I employ the term “people who inject drugs,” as used by the United Nations and others, while retaining the acronym “IDU.”
controlled substances.\textsuperscript{7,8} In theory, the treaties are flexible enough to accommodate a range of public health responses to problematic drug use (e.g., providing addiction treatment services) instead of punishment; however, the international entities charged with interpreting the conventions have tended to direct the state parties to respond to illicit drug use by enforcing criminal laws.\textsuperscript{9,10}

In recent years, there has been growing concern among public health practitioners, scientists, and policy makers worldwide that the overreliance on criminal law enforcement has not reduced drug use and has instead produced unintended consequences, including the marginalization of people who use drugs and widespread epidemics of infectious disease among IDU.\textsuperscript{6,11,12} Unfortunately, aggressive drug prohibition approaches continue to be emphasized in settings hardest hit by HIV epidemics among IDU,\textsuperscript{7} despite the fact that international guidelines issued by the World Health Organization (WHO) and the United Nations (UN) recommend taking a public health approach to this problem (e.g., harm reduction).\textsuperscript{13}

1.2 Study Setting

Thailand, located along some of the world’s major export routes for illicit drugs, is home to a population that is particularly vulnerable to drug-related harm. During the 1970s, the country became the world’s largest opium refining and distribution site, and heroin use became a major driver of drug-related harm in this setting.\textsuperscript{14,15} Since the late 1990s, there has been a dramatic increase in the use of methamphetamine, which is now the most widely used illicit drug in the country.\textsuperscript{16} The most recent national household survey estimated that in 2007, more than 5\% of the population (approximately 2.5 million people) had used illicit drugs at some point in their lives, and more than 575,000 did so during the past 12 months.\textsuperscript{17} While estimates of IDU population in Thailand vary widely, with studies indicating
numbers ranging from 48,000\textsuperscript{18} to 270,000,\textsuperscript{19} recent reports, including one by the 2007 Reference Group to the UN on HIV and Injecting Drug Use,\textsuperscript{2} referred to 160,000 as an estimated number of Thai IDU.\textsuperscript{20,21}

In response, the Thai government has relied on criminal law enforcement to address illicit drug use.\textsuperscript{22} In 1975, Thailand ratified the 1961 Single Convention on Narcotic Drugs\textsuperscript{23} and the 1971 Convention of Psychotropic Substances.\textsuperscript{24} In 2002, Thailand became a signatory to the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.\textsuperscript{25} The 1975 Psychotropic Substances Act B.E. 2518 and the 1979 Narcotics Act B.E. 2522 impose criminal sanctions against the unauthorized production, distribution, sale, possession, and consumption of controlled substances.\textsuperscript{26} According to the terms of these drug statutes, those involved in trafficking of certain controlled substances (e.g., heroin and amphetamine type substances) may be sentenced to capital punishment.\textsuperscript{26} In 1976, the Narcotics Control Act B.E. 2519 was enacted, and the Office of the Narcotics Control Board (ONCB) was established to coordinate national drug control efforts.\textsuperscript{26}

Although Thailand enacted the Narcotic Addict Rehabilitation Act B.E. 2545, which reclassified people who use drugs as “patients” instead of “criminals,” in 2002, possession and consumption of illicit drugs remain criminal offenses.\textsuperscript{26} Furthermore, the new legislation created a system of compulsory drug detention centres (referred to as bangkap bambat or “forced treatment”). Under this system, those charged with illicit drug use are sent to pre-trial detention facilities while waiting for the eligibility assessment for compulsory drug detention centres that supposedly provide drug “treatment” for the duration of a few months.\textsuperscript{27} However, past reports have indicated that the majority of these centres were run by the military, and that so-called “treatment programs” consisted primarily of intensive physical exercise and therapeutic community programming and offer little in the
way of scientifically sound addiction treatment.\textsuperscript{27,28} In March 2012, twelve UN agencies released a joint statement stating that such compulsory drug detention centres violated international human rights law and calling on governments to close down the centres.\textsuperscript{29} However, the compulsory drug detention system continues to proliferate to this day.

With this legislative framework in place, Thailand has traditionally maintained strict drug prohibition policies in an effort to make the country “drug free.”\textsuperscript{30,31} While the country’s national drug policy has been revised every 2-3 years over the past decade, principal measures of drug control remain unchanged and consist of supply reduction, demand reduction, potential demand reduction (i.e., drug use prevention), and integrative management (i.e., effective coordination of the other three principal measures).\textsuperscript{31-40} All policy documents during this period refer to a core principle, which is that “addicts are patients who are in need of treatment, while traffickers are those who must be punished under the rule of law.”\textsuperscript{31-40} However, this principle does not exclude people who use drugs from repressive policing. According to the ONCB, “drug addicts must enter treatment and rehabilitation programs” through one of the three schemes: voluntary drug treatment programs, compulsory drug detention centres, and prison-based treatment programs.\textsuperscript{40} Although the policy, in theory, prioritizes efforts for encouraging enrolment in voluntary drug treatment, in practice, the Thai government has implemented a series of police crackdowns to detain people who use drugs in compulsory drug detention centres and prison-based treatment programs. Between 2008 and 2011, Thai authorities increased the number of people who use drugs targeted to enter rehabilitation programs from 60,000 in 2008 to 400,000 in 2011.\textsuperscript{41-44} During this period, the number of people enrolled in drug treatment increased as well, from 89,999 in 2008 to 170,485 in 2011, while more than
60% of these “patients” were placed in compulsory drug detention centres and approximately 15% were in prison-based treatment programs each year.\(^{31,39,40}\) In particular, a renewed policy initiative in 2011 has led to a record number of people being detained in compulsory drug detention.\(^{45}\) The statistics illustrate that Thailand’s demand reduction measures are driven by an ideology of abstinence from illicit drug use and have relied heavily on repressive policing to coerce people who use drugs into drug “treatment.”

The over-reliance on police force raises concerns about potential human rights abuses being committed against arrestees and detainees. Human rights organization have noted that Thai police have long been alleged to have committed human rights violations, including through excessive use of force, ill-treatment at the time of arrest and during police custody, and widespread use of torture and cruel, inhuman, and degrading treatment of detainees.\(^{46,47}\) Most notably, aggressive policing practices under the “war on drugs” campaign of 2003 resulted in the extrajudicial killing of more than 2,800 alleged drug dealers and users.\(^{22,48}\) However, impartial and prompt investigations into alleged cases of grave abuses by police have seldom been conducted.\(^{46,49}\) Even when they were, few investigations have resulted in prosecutions, and even fewer in convictions.\(^{46,49}\) In addition, previous reports have suggested that corruption is deeply entrenched in public sectors in Thailand, and the police force was listed as one of the most corrupt institutions in 2010.\(^{50,51}\) These known features of the Thai police raise concerns about ongoing policing practices pertaining to drug control (hereinafter referred to as drug policing).

As the “war on drugs” continues unabated, the available evidence suggests that Thai IDU continue to suffer from alarmingly high rates of mortality and morbidity. A study showed that mortality rates among IDU in northern Thailand
were 5.8 times higher than those in the general population, and the excessive mortality was associated with HIV-seropositivity, benzodiazepine use, and excessive alcohol consumption.\textsuperscript{52} Furthermore, since the 1990s, there has been a dramatic increase in incarceration rates for drug-related offenders.\textsuperscript{53} As of May 2012, 64\% of all incarceration events in Thailand were attributable to drug-related charges.\textsuperscript{54} Incarceration carries well-documented risks of drug-related harm among IDU, including transmission of blood-borne pathogens and overdose.\textsuperscript{53,55-59}

Indeed, Thailand is listed among the top ten countries where IDU are most severely affected by the dual epidemics of HIV and HCV, with an estimated prevalence of 30–50\% and more than 90\%, respectively.\textsuperscript{60-62} Despite these problems, needle and syringe programs (NSPs), which are recommended by WHO and other UN agencies as essential HIV prevention services for IDU,\textsuperscript{13} remain controversial in Thailand until today. While public health authorities endorsed NSPs, legal authorities regard them as illegal.\textsuperscript{63,64} In this context, less than 1\% of Thai IDU reportedly have access to NSPs.\textsuperscript{65} Collectively, these reports illustrate that Thai IDU are facing grave threats to their health.

\textbf{1.3 Study Justification}

In the wake of the renewed and intensified crackdowns on illicit drug use in Thailand\textsuperscript{45} and the persistent HIV epidemic among Thai IDU,\textsuperscript{61} there is concern among human rights advocates and public health researchers and practitioners that the Thai government’s extensive use of its police force to search and arrest IDU may be rendering IDU populations susceptible to human rights abuses, HIV infection, and other health concerns.\textsuperscript{66,67} While the most common form of drug use is smoking crushed methamphetamine tablets,\textsuperscript{16,17,68} IDU represent a particularly vulnerable population in this setting due to the high rates of morbidity and mortality.\textsuperscript{52,60-62} In Thailand, it is well known that aggressive policing practices under the “war on
“drugs” campaign of 2003 resulted in grave human rights violations. Since then, however, few studies have been undertaken to characterize the harms that may be associated with policing practices under the subsequent drug policy initiatives. As well, the impact of intensified drug suppression efforts on Thailand’s illegal drug market has not been evaluated. Therefore, there is an urgent need for a systematic investigation of ongoing repressive drug policing and the impact on public health and human rights concerns in Thailand.

Previous research has indicated that repressive policing of drug users can harm IDU directly through various forms of police violence and indirectly through multiple pathways; to date, a number of studies have collectively identified various ways in which policing activities may increase IDUs’ vulnerability to HIV infection and other poor health outcomes. However, these studies have tended to focus on the aggregate effects and consequences of police crackdowns rather than on specific policing tactics. While a smaller number of studies have described the impact of certain police actions on IDU (e.g., syringe confiscation by police), other tactics that police may commonly employ, such as urine testing of alleged drug users, have not been fully explored. Examining specific policing tactics will advance the knowledge in this field and produce important evidence and practical recommendations regarding ongoing policing practices.

1.4 Conceptual Framework

This research draws on a modified version of Rhodes’ Risk Environment Framework. Central to this framework is the notion that a variety of environmental factors exogenous to the individual interact with each other to increase or reduce vulnerability to poor health outcomes. The framework delineates types of environment (structural, social, and physical), levels of environmental influence (micro, meso, and macro) and mechanisms of environmental influence.
(intermediate pathways to increase susceptibility and vulnerability to poor health outcomes) that help unpack the key dimensions of a given risk environment. In the past decade, this framework has been extensively applied to examinations of police crackdowns on the health of IDU.81,82

Policing activities are conceptualized as key features of the micro-level risk environment, which is shaped primarily by macro-level structures (e.g., drug laws and policies) and meso-level social and physical environments (e.g., resources available for policing).83 This research also recognizes the existence of a policy process through which drug policy may not fully translate into street-level policing activities due to internal organizational factors within the police as well as external factors (e.g., stigma attached to IDU) that may influence police officers’ interactions with IDU.83,84 Based on previous studies examining the impact of repressive policing on IDU,69,70,72,77,82,85-87 a conceptual framework was developed to guide the research, as shown in Figure 1. While many factors in the diagram may be interrelated with each other, regression analyses in this dissertation seek to tease out the complex web of causation and identify factors independently associated with policing practices. This will help develop types of interventions needed for improving the health of IDU.

In addition, this research will assess the human rights implications of the drug policing practices in question. The added value of using human rights norms and principles for this research includes that they can set ethical standards for evaluating policing practices and drug policies, offer a powerful and common vocabulary for describing the vulnerability of the study population, and provide mechanisms to demand accountability for rights violations to national governments and human rights institutions within the UN.88-90 As highlighted in a statement by the UNODC,91 there is a growing recognition that drug control efforts need to be better synchronized with human rights guidelines and standards, and tools for
assessing the potential human rights impacts of drug control efforts are needed. This research seeks to respond to that call by generating empirical evidence about how this situation stands in Thailand.

1.5 Study Objectives

The central aim of this dissertation is to examine the relationship between drug policing and the health of IDU in Bangkok, Thailand and the availability of drugs in this setting. Analyses involve characterizing the nature and context of policing practices, and examining the relationships between certain policing practices (i.e., police-perpetrated physical violence and drug testing) and HIV risk behaviour and other health-related outcomes among a community-recruited sample of IDU in Bangkok. As well, in an effort to estimate the impact of drug policing on the illegal drug market, additional analyses seek to assess changes in the street-level availability of illicit drugs between two time points in Bangkok. In addition, using internationally recognized human rights principles, this research aims to elucidate human rights abuses related to the pursuit and arrest of IDU in Bangkok. Specifically, the research focuses on the following objectives and hypotheses:

1. **To characterize factors leading to interactions with police officers among IDU in Bangkok, and to analyze specific policing tactics employed during these interactions and IDUs’ reactions to the policing practices.** Using qualitative data collected through semi-structured interviews, Chapter 3 analyzes how social and structural factors shape the encounters with police among IDU in Bangkok and identifies specific policing tactics that violate human rights. This chapter also explores IDUs’ perceptions of social and structural barriers to seeking justice for police misconduct and their strategies for avoiding future encounters with police officers, as well as how these
experiences shape healthcare access and drug-using behaviour among IDU in Bangkok.

2. **To identify the prevalence and correlates of experiencing police beatings among IDU in Bangkok.** In order to investigate the relationship between police-perpetrated physical violence and the health of IDU in Bangkok, Chapter 4 uses log-binomial regression to identify factors associated with reported police beatings. While police-perpetrated physical violence can take various forms, including police leaving people to suffer from extended withdrawal and detaining people in unhygienic facilities, police beating was chosen for the present analysis. Given the widespread reports of police beating alleged drug dealers and users during the 2003 “war on drugs” campaign, there was a possibility that this form of police violence had persisted through the subsequent police crackdowns. It is hypothesized that a high proportion (more than 30%) of a community-recruited sample of IDU in Bangkok have been beaten by police. Based on the conceptual framework (Figure 1), it is hypothesized that having been beaten by police is independently associated with: a history of incarceration, a history of compulsory drug detention, injection-related risk behaviour (i.e., syringe sharing), and reporting barriers to accessing healthcare.

3. **To identify the prevalence and correlates of experiencing urine drug testing by police among IDU in Bangkok.** To investigate the implications of another specific policing tactic for the health of IDU in Bangkok, Chapter 5 uses Poisson regression to identify factors associated with experiencing urine drug testing by police. Drug testing was chosen as a policing tactic of interest in light of anecdotal reports about its pervasive use among IDU in Bangkok. While drug testing is believed to be one of the common tactics employed by
police in Bangkok, little is known about its effects on the health of IDU. It is hypothesized that a high proportion (more than 50%) of a community-recruited sample of IDU in Bangkok have been subjected to drug testing by police. Guided by the conceptual framework (Figure 1), it is hypothesized that exposures to drug testing by police are independently associated with: a history of incarceration, a history of compulsory drug detention, internalized stigma (i.e., feeling ashamed about being a drug user), and reporting avoidance of healthcare.

4. **To examine the relationship between direct exposures to policing practices and syringe sharing among IDU in Bangkok.** Building on the previous chapters, Chapter 6 uses log-binomial regression to examine the relationship between syringe sharing and exposures to two types of policing practices: having ever been beaten by police and having been tested for illicit drugs by police in the past six months. It is hypothesized that both experiences of severe police violence (regardless of the timing) and recent direct encounters with police (operationalized as having been subjected to drug testing by police) would increase fear of police and in turn, increase the likelihood of IDU sharing syringes.

5. **To estimate the impact of drug policing on the street-level availability of illicit drugs among IDU in Bangkok.** Motivated by the lack of research evaluating the impact of drug policing efforts on the illegal drug market, Chapter 7 uses serial cross-sectional data collected before and after 2011, when the Thai government intensified the police crackdown on illicit drugs, and assesses changes in the availability of five substances commonly used among IDU in Bangkok between 2009 and 2011. This study also seeks to examine social, structural, and individual factors influencing drug
availability. It is hypothesized that street-level availability of illicit drugs will have remained constant throughout this two-year period. Given some recent government and media reports indicating a large-scale drug dealing within prisons, a history of incarceration and compulsory drug detention are also hypothesized to increase the availability of illicit drug.

1.6 Study Design

1.6.1 Mitsampan Community Research Project

This research was undertaken through the Mitsampan Community Research Project, a collaborative research effort involving the Mitsampan Harm Reduction Center (MSHRC; Bangkok, Thailand), Thai AIDS Treatment Action Group (TTAG; Bangkok, Thailand), Chulalongkorn University (Bangkok, Thailand), and the Urban Health Research Initiative (UHRI) of the British Columbia Center for Excellence in HIV/AIDS / University of British Columbia (Vancouver, Canada). The MSHRC is a drug user-run drop-in centre that opened in 2004 in a part of central Bangkok where many people who use drugs reside. The MSHRC operates independently of government-sponsored treatment programs and provides a broad range of peer-led harm reduction services.

Launched in 2008, the Mitsampan Community Research Project is a serial cross-sectional mixed-methods study that aims to investigate drug-using behaviour, barriers to healthcare access, and other drug-related harm among IDU in Bangkok. This project employs a community-based research approach. The overarching aims of the study were developed based on the needs expressed by the TTAG and MSHRC representatives, which were to increase the uptake of the MSHRC’s programs and to collect local evidence for national policy advocacy that demonstrated the situation facing local IDU, and described their immediate health-related challenges. A group of peer researchers (i.e., active or former drug users at
the MSHRC) were hired and trained in research ethics, outreach, and interviewing techniques for this study. They were involved in all stages of the research, including the development of the research questions and study design. For example, a survey instrument was designed in consultation with the peer researchers in several phases. The first phase involved brainstorming about key issues in the community. The academic researchers then drafted a survey questionnaire to reflect these concerns. Follow-up discussions involved fine-tuning the data collection instrument to ensure a proper scope of question topics and adjusting language discrepancies between English and Thai versions with the assistance of bilingual staff persons at TTAG. This participatory process helped ensure that the research efforts addressed concerns immediately relevant to the local IDU community. Respondent recruitment strategies were carefully planned with consideration for the needs and assets of the MSHRC. To date, 32 peer researchers have been trained and involved in the project. Between 2008 and 2011, the research team completed three cycles of surveying and reached an accumulated total of 1,009 IDU (778 unique individuals) in Bangkok. In 2011, a qualitative arm was added to the project, and 48 in-depth interviews were conducted in conjunction with the surveys. The qualitative study sought to explore IDUs’ experiences with drug policing, compulsory drug detention, and access to HIV testing and care. A detailed description of the data collection procedures is provided in sections 1.6.2 and 1.6.3. Qualitative and quantitative data are concurrently but separately analyzed. Chapter 8 brings the separate results together in the interpretation.

As a coordinator for the Mitsampan Community Research Project, the author has been actively involved in the project since 2008 and spent over 1,500 hours conducting fieldwork in Bangkok. With support and guidance from the principal investigator, other investigators, and local community research partners, the author
took a lead role in all research stages, including the development of the data collection instruments, training of peer researchers and local research assistants, data collection, management and analysis, manuscript development, and dissemination of the findings.

1.6.2 Quantitative data collection

The core procedures for quantitative data collection remained the same over the three survey cycles in 2008, 2009, and 2011. The respondent recruitment criteria included: being 18 years of age or older; living in Bangkok or adjacent provinces; being able to understand and speak Thai; and having injected drug(s) during the six months prior to the interview. Individuals who were under the influence of alcohol or drugs, unable to have a conversation in Thai, unable to understand and agree to the study procedures (i.e., provide informed consent); or needed a parent or guardian’s consent to participate in the study (i.e., being less than 18 years old) were excluded from participation. Potential respondents were contacted through peer outreach and word-of-mouth and invited to the MSHRC to learn more about the study. After providing verbal informed consent, a respondent completed an interviewer-administered questionnaire covering a range of topics such as demographic data, information on drug use patterns, HIV risk behaviour, health problems, access to healthcare, and experiences with the criminal justice system. The respondents received an honorarium of 250 Thai baht (in 2008, approximately US $8.60) or 350 Thai baht (in 2009 and 2011, approximately US $12) for each completed questionnaire for their time and travel expenses. The amount changed between 2008 and 2009 because of the increases in the size of the questionnaire.

In order to increase the sample size, additional data collection was undertaken at another drop-in centre in Bangkok called O-Zone House in 2011. Founded in 2005, O-Zone House is run by an international non-governmental
organization, Population Services International. Like the MSHRC, O-Zone House provides a range of harm reduction services to local IDU. During the data collection period, peer researchers from the MSHRC traveled to the O-Zone House, recruited respondents, and administered surveys in the same way they did at the MSHRC. In August 2008, 252 IDU participated in the study; 317 between June and July 2009, and 440 between July and October 2011. Some individuals participated in two or three waves of surveys. However, as respondents did not keep the same participation codes over the years, repeat respondents were identified by their self-reports: reporting “Yes” to questions in the 2009 and 2011 questionnaires: “Did you participate in our survey in 2008 and/or 2009?”

1.6.3 Qualitative data collection

Between July 2011 and June 2012, respondents for the qualitative arm of the study were recruited from the 440 respondents in the quantitative arm, as well as via peer outreach and word-of-mouth. Two bilingual Thai research assistants were trained to conduct in-depth interviews in Thai based on a semi-structured interview guide that the author developed with guidance from supervisors and research partners. Topics for in-depth interviews included current drug use patterns, encounters with police, experiences with compulsory and voluntary drug treatment, access to HIV testing and treatment, and access to general healthcare. After obtaining verbal informed consent from potential interviewees, the research assistants conducted interviews at the MSHRC and O-Zone House. Each in-depth interview was audio-recorded, transcribed verbatim, and translated into English. Research assistants and translators who had developed familiarity with terms used among local IDU reviewed the translated transcripts for language accuracy. Furthermore, a native English-speaking proof-reader with an excellent knowledge of the idiomatic correlates between Thai and English also verified English
transcripts for grammatical accuracy and nuance by comparing the English transcripts with Thai transcripts and audio-files. The methods of conducting and transcribing in-depth interviews in Thai and subsequently translating transcripts into English were successfully used in a previous qualitative study examining sexual behaviour among methamphetamine users in Thailand. The interviewees received an honorarium of 450 Thai baht (approximately US $15) for their time and travel expenses for each completed in-depth interview. In total, 48 IDU completed in-depth interviews. A more detailed description of the qualitative research methods used in this dissertation is noted in section 3.2.

1.7 Summary

This dissertation consists of eight chapters. Chapter 2 is a review of the literature focused on the adverse impacts of drug policing on the health of people who use drugs. Drawing on the Risk Environment Framework, the author delineates how policing practices produce drug-related harm, as well as how these practices intersect with distinct types of environments and increase IDUs’ vulnerability to drug-related harm. The qualitative analysis in Chapter 3 sets the scene for drug policing activities in Bangkok by characterizing the circumstances and situational factors leading to interactions with police officers, as well as analyzing specific policing tactics employed during these interactions with respect to international human rights norms. The epidemiological analyses in Chapters 4–6 explore harms associated with specific policing tactics commonly used against IDU. Specifically, the author identifies the prevalence and correlates of police beatings (Chapter 4) and police-conducted drug testing (Chapter 5). Chapter 6 examines the relationship between syringe sharing and exposures to police beatings and drug testing. Chapter 7 seeks to estimate the impact of drug policing efforts on the illegal drug market in Bangkok. Finally, Chapter 8 synthesizes the key study findings and
assesses the human rights implications of the findings. It also presents limitations, recommendations, and directions for future research.
Individual factors interact with the macro-structural, meso- and micro-social/physical environments to facilitate pathways to intermediate and health outcomes. Adapted from the Risk Environment Framework (Rhodes, 2002, 2009).
CHAPTER 2: LITERATURE REVIEW: THE IMPACTS OF DRUG POLICING ON RISK ENVIRONMENTS AND HEALTH-RELATED HARM AMONG PEOPLE WHO INJECT DRUGS

2.1 Introduction

Many countries continue to rely heavily on drug prohibition approaches and repressive policing to address problems related to illicit drug use. This tendency reflects features of the international system of drug control. Over the past several decades, the system has been established through three international drug conventions—the 1961 Single Convention on Narcotic Drugs, the 1971 Convention on Psychotropic Substances, and the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances—and has emphasized strict criminal law enforcement against illegal production, distribution, and consumption of the controlled psychoactive drugs. As virtually every nation in the world has ratified at least one of these conventions, the international drug prohibition scheme has exerted a tremendous influence on domestic drug legislation.

To date, several reviews have been conducted to describe the adverse impacts of intensive drug policing on the health of IDU internationally. A peer-reviewed literature review conducted by Kerr et al. described mechanisms through which policing practices in the drug market may produce negative impacts on public health. Strathdee et al. systematically reviewed epidemiological studies on the determinants of HIV infections in IDU. They identified several studies showing that aggressive police practices were associated with HIV seroconversion. Jürgens et al. reviewed more than 900 published reports to examine links between human rights abuses experienced by people who use drugs and vulnerability to HIV infection and access to health services. They found many aspects of drug laws, policies and practices that violated human rights and increased vulnerability to HIV/AIDS. These
reviews collectively provided a rich description of health-related harm attributable to punitive drug laws and policing practices among people who use drugs.

Although these previous reviews referred to the Risk Environment Framework, the impacts of drug policing have seldom been analyzed by type and level of the risk environment. As the framework has become extensively utilized in research on the health of IDU over the past decade, it is useful for future research in this field to delineate how drug policing practices are situated in a given risk environment. Furthermore, as the literature in this field has rapidly grown in recent years, there is a need to identify remaining knowledge gaps. Therefore, this literature review sought to describe the evidence pertaining to the effects of drug policing on the health of IDU, using the Risk Environment framework, and identify remaining research gaps in this field.

2.2 Methods

This review identified English-language literature through online searches of Medline, Web of Science, and Google Scholar. Various search terms were used in combination, including “law enforcement,” “police,” “crackdown,” “substance abuse,” “injection drug use,” “drug-related harm,” and “HIV.” Additional literature was identified in the bibliographies of earlier reviews. The literature used included peer-reviewed scientific studies (i.e., quantitative studies, qualitative and ethnographic studies, and review studies) and research reports published by civil society organizations. While the primary focus was on the health of IDU, the review included literature describing the impacts of drug policing on the health of people who use drugs in general, when the impacts were applicable to IDU. As a first step, this review summarized examples of policing practices that have direct relevance to IDU. Policing practices that primarily target drug dealers and traffickers were excluded from this review. Then, the impacts of drug policing were described
according to the Risk Environment Framework.\textsuperscript{79,80} Directions for future scientific research were then identified in section 2.4.

2.3 Results

2.3.1 Street-level drug policing

Street-level drug policing is largely shaped by drug laws and policies (which are features of the macro-level structure), among other factors.\textsuperscript{83} Such laws and policies include drug and drug paraphernalia laws,\textsuperscript{83,101} drug user registration systems,\textsuperscript{102} compulsory drug detention systems,\textsuperscript{27,103} and policies on harm reduction programs.\textsuperscript{104,105} Although drug laws and policies differ across jurisdictions, police officers typically serve several aims. In settings where drug policies focus on strict drug prohibition and pursue complete eradication of illicit drugs, police intervene in drug markets by removing drug dealers and users through criminal justice measures, such as incarceration.\textsuperscript{106} As part of demand reduction strategies, police are also expected to deter people who use drugs from sustaining drug-using habits by disrupting illegal drug markets and by fuelling fear regarding the adverse consequences of arrest.\textsuperscript{82,107} These goals may be central to police officers who specialize in drug control, although for other police officers, the goals are situated under a broader mandate of policing to maintain public order and enforce drug laws.\textsuperscript{108} There can be heterogeneity in the extent of drug policing, due to differences in management policies, procedures, and training within police, as well as the discretionary power given to police officers and social milieus that may affect police behaviours.\textsuperscript{83,108}

Policing approaches (which are a feature of the meso-level structure) also affect street-level drug policing. Weisburd and Eck\textsuperscript{109} conceptualized modern policing approaches according to the levels of focus, as well as the diversity of actors and interventions. Based on their work, Mazzerolle et al.\textsuperscript{110} classified four policing
approaches: (1) “hot spot” policing, which focuses on small geographical areas with high concentrations of crime (i.e., “hot spots”) and relies on intensive policing; (2) problem-oriented policing, which focuses on specific geographical areas or problems and involves multi-agency collaborations (e.g., public health agencies) and, consequently, multiple interventions; (3) community policing, which aims to deal with a range of problems in a larger area through partnerships with community stakeholders and diverse interventions; and (4) standard policing, which is unfocused in terms of geographical area or type of problem addressed, and relies on traditional policing strategies such as patrols.

One widely documented policing strategy that is often employed in hot spot policing and is directly relevant to people who use drugs is called “sweeps” or “crackdowns,” which Cooper et al. defined as “centrally organized, rapidly initiated, sustained police efforts crafted to reduce the possession and sale of illicit drugs through heightened surveillance and arrest of drugs users and street-level dealers” (p.674). Other similar but different strategies include high visibility policing and saturation policing, in which substantial numbers of police officers are deployed to a specific area, in order to deter people from committing a crime. In these strategies, however, the emphasis may not necessarily be on drug-related offenses but on other offenses more broadly. Police search-and-arrest tactics are diverse and include surveillance via closed-circuit television, raids on the street, night clubs, and other places, information gathering through police informants and drug user registries, buy-bust operations, drug detection dogs, and rapid urine toxicology screening.

2.3.2 Individual-level impacts of direct encounters with police

One of the most direct adverse impacts of drug policing is police-perpetrated violence against people who use drugs. A number of human rights reports and
qualitative studies from the Americas, Eastern Europe, Australia, and Asia documented police violence against people who use drugs, including physical violence, such as beatings and using forced drug withdrawal to coerce confession, sexual violence, psychological violence (e.g., undue threats and harassment), and neglect. The most extreme example was found in Thailand, where more than 2,800 alleged drug dealers and users were killed extrajudicially during the government-initiated three-month “war on drugs” campaign in 2003. Additionally, police may abuse IDU through arbitrary arrests and extortion. In many settings, it was reported that IDU were often arrested for carrying sterile or used syringes, even in settings where the possession of syringes was not illegal. Arrests for having needle-marks, as well as confiscation of drugs, syringes, and antiretroviral drugs were also documented. These abuses of police power have been termed “lethal” human rights violations by Csete and Cohen. Moreover, police violence and misconduct likely also produce other harms by creating a climate of fear among IDU, which is described in detail in the following section 1.3.3.

A smaller number of quantitative studies have examined the prevalence and associated harm of police misconduct and abuse of power among IDU. In Bangkok, Thailand, 48% of a community-recruited sample of IDU reported having had drugs planted on them by the police, which was independently associated with syringe lending and a history of compulsory drug detention. In Odessa, Ukraine, police beatings were shown to elevate the likelihood of syringe sharing among IDU, and a mathematical model estimated that the elimination of this police practice would avert 4–19% of new HIV infections among IDU by 2015. Two cross-sectional studies of IDU in Mexico-US border cities found that about half of the study participants experienced unlawful police actions: having syringes confiscated by
police\textsuperscript{123} or having been arrested for carrying an unused syringe.\textsuperscript{76} Experiences of syringe confiscation were associated with HIV seropositivity,\textsuperscript{123} and experiences of arrests for possessing both unused and used syringes were found to be independently associated with recent receptive syringe sharing (i.e., using a syringe used by others) and injecting in shooting galleries, after adjusting for potential confounders.\textsuperscript{76} Arrests for carrying needles were also found to be associated with suicidal ideation among male IDU in Delhi, India.\textsuperscript{124} These findings suggest that police violence and misconduct may be fuelling fear of police among IDU and prompting them to engage in risky injection behaviours.

In Tijuana, Mexico, frequent arrests for having needle-marks were found to be an independent risk factor for HIV seroconversion among IDU, while a history of incarceration was not associated with HIV infection.\textsuperscript{125} Taken together with a previous qualitative study conducted in this setting,\textsuperscript{118} this longitudinal study indicates that this policing practice may be increasing IDUs’ vulnerability to HIV infection by pressuring them to engage in rushed injections or inject in shooting galleries, both of which are known to increase the risk of syringe sharing.\textsuperscript{126,127}

2.3.3 Impacts through the micro-level social and physical environment

In the Risk Environment Framework, drug policing is considered to be a key feature of the micro-level social environment.\textsuperscript{79} Policing activities can produce an array of drug-related harms by fuelling fear of police among IDU and by disrupting established drug markets and social networks of IDU (impacts through the micro-level social environment). They can also interact with the micro-level physical environment and result in interfering with harm reduction and health services and displacing locations for injection drug use.

As Sarang et al.\textsuperscript{69} described, policing practices, particularly extrajudicial practices, can generate fear of police among IDU, even in the absence of crackdowns.
Fear of police has been shown to shape IDUs’ drug-injecting behaviours. It can discourage IDU from carrying sterile syringes, prompt rushed injections and other risky injection behaviours (e.g., syringe sharing), and result in unsafe disposal of used syringes. Fear of police also can also result in displacement of IDU into more hidden locations, where safer injection practices are often difficult to maintain and medical emergencies are hard to address.

All of these behaviours have the potential to exacerbate to harm individuals and communities. For example, rushed injections are known to increase the risk of overdose, cutaneous infections, and vascular and nerve damage by undermining the important steps needed to ensure a safe injection. In the United States and Mexico, fear of arrest was shown to prompt IDU to use shooting galleries—a physical environment known to increase the risk of HIV and HCV transmission due to the sharing of injection equipment. An ethnographic study from Australia reported another dangerous consequence of fear of police: nasal and oral drug storage, which can lead to the transmission of tuberculosis and other blood-borne viruses by risking exposure to blood and bodily fluids, as well as overdose when drugs are accidentally swallowed.

Several studies have shown that increased police presence in one neighbourhood can serve to displace people who use drugs to different neighbourhoods. In Vancouver, ethnographic and human rights investigations documented the displacement of a large population of IDU from an area subjected to a police crackdown into adjacent areas of the city. This finding was corroborated by a quantitative study showing that the intensity of injection drug use among IDU did not change as a result of the crackdown, although the number of used syringes disposed of on the streets increased significantly in the adjacent areas.
Fear of police has also been shown to discourage IDU from seeking healthcare, including emergency medical services.\textsuperscript{137,138} In an investigation of heroin overdose experiences among IDU in South Australia, McGregor et al.\textsuperscript{137} found that fear of police was the primary reason for delaying or stopping attempts to obtain help in the event of an overdose. This finding was consistent with a report from St. Petersburg, Russia.\textsuperscript{138} Police presence and harassment near clinics, pharmacies, and harm reduction service points have been documented in many reports and are shown to impede drug users’ access to sterile syringes, other health and social services, as well as the outreach efforts of these programs and services.\textsuperscript{73,86,87,108,115,117,139} In a study of substance-using women engaged in street-based sex work in Vancouver, Canada, Shannon et al.\textsuperscript{136} vividly illustrated this point by using social mapping techniques. They found that women who were displaced by policing tended to move away from areas where harm reduction services were provided. Another quantitative study from Vancouver demonstrated that the number of syringes reaching IDU from a night-time syringe exchange program declined by more than 26\% during a police crackdown.\textsuperscript{140}

Drug policing activities are designed to disrupt drug markets. However, past reviews of research have suggested that the impacts of such activities are modest and temporary at best.\textsuperscript{82,107} Despite mixed reports on the relationship between policing activities in a drug market and subsequent increases in the price of drugs, a strong consensus exists on the remarkable resilience of drug markets in response to policing efforts—they became increasingly sophisticated by transitioning from open markets to closed ones, increasing the complexity in distribution structures, and using new information technologies.\textsuperscript{82,107} The sophistication of drug markets has also made street-level drug dealing more volatile and elusive.\textsuperscript{108} In fact, a recent systematic review found a positive association between aggressive drug policing
and drug market violence, suggesting that gun violence and high homicide rates were likely the inevitable consequences of increasing policing efforts within drug markets.\textsuperscript{141}

In instances where a drug market was temporarily disrupted, it was reported that people who use drugs simply changed the types of drugs they consumed (e.g., diverted prescription medicines) or their routes of administration,\textsuperscript{108,142,143} which sometimes resulted in an increased risk of drug-related harm. For example, in 2001, New South Wales, Australia experienced a sudden and substantial reduction in heroin availability.\textsuperscript{144} A longitudinal study of IDU in this setting found that a reduction in heroin injection was coupled with a concomitant increase in cocaine injection among the study sample, and cocaine injection was shown to be an independent risk factor of HCV infection.\textsuperscript{143} The transition from smoking to injecting heroin has also been observed in many settings and has had serious implications for public health, due to an increased risk of blood-borne disease transmission.\textsuperscript{14,108}

Several ethnographic studies have suggested that intensive drug policing during crackdowns disrupts established social networks among drug dealers and users. This likely leads to increased threats or acts of violence used to obtain drugs and the sale of fake or low-quality drugs.\textsuperscript{72,74,130} The disruption of stable networks may also result in the reconstitution of HIV sero-mixed networks, which facilitate the spread of HIV among IDU.\textsuperscript{83,145} In addition, Blankenship and Koester\textsuperscript{130} suggest that the police use of IDU as informants may have created mistrust and discouraged social cohesion among IDU and consequently undermined the effectiveness of peer-based harm reduction services.

\subsection*{2.3.4 Impacts through the meso-level social and physical environment}

Drug policing activities also intersect with certain meso-level environmental factors and shape IDUs’ vulnerability to poor health. These factors include detention
in state custody (the meso-level physical environment), as well as accessibility of health and social services and stigma attached to IDU (the meso-level social environment).

Intensive policing practices can subsequently have serious impacts on the meso-level physical environment, including the overcrowding of penal institutions due to increased drug-related arrests.\textsuperscript{53,106,146} In most settings, prison systems lack sufficient resources to effectively deal with growing incarcerated populations. For example, in Thailand, drug users are routinely detained in prisons for 45 days or longer to undergo an eligibility assessment for compulsory drug detention, even though the law indicates that an assessment should generally take place within 15 days.\textsuperscript{27} The prolonged assessment period was reportedly due to the limited human resources.\textsuperscript{27} Penal institutions, including pre-trial detention facilities, are environments where infectious diseases are known to spread, and where other health and human rights concerns, such as torture and physical abuses, sexual violence, and inadequate basic living conditions, remain major challenges.\textsuperscript{58,147,148}

In addition, in the United States, those who were convicted of drug-related felonies generally lose eligibility for welfare services and public housing, cannot receive home and student loans, grants for higher education, and in some states lose the right to vote.\textsuperscript{126,130,149} Sentencing and incarceration have also been shown to reduce chances of access to and success in the labour market.\textsuperscript{150} These are distal effects of drug policing on the health and well-being of IDU that are produced through the intersection of other elements in the meso- and macro-level environment.

In some Asian countries where compulsory drug detention centres are instituted, IDU who are arrested by police can be subjected to detention without due process, physical and sexual violence, forced labour, substandard living conditions,
and so-called “treatment” programs not based on medical evidence and fail to adhere to best practices in addiction treatment. In March 2012, twelve UN agencies issued a joint statement urging governments to close down these detention centres, due to human rights and health concerns. This call was echoed by the UN Special Rapporteur on torture in March 2013. However, it remains a serious concern that this type of cruel and inhumane treatment has continued.

Intensive policing practices can also penetrate healthcare settings, in which police officers obtain information on suspected drug users from healthcare providers and search and arrest the suspects. This practice has been shown to reduce the accessibility of healthcare services for IDU. Where drug user registration laws are in place, the patients’ right to confidentiality of medical information is violated, and information sharing between police and healthcare providers increases vulnerability to police abuse and extortion and constitutes a barrier to seeking medical attention. In Thailand, even though drug user registration laws are not in place, a human rights investigation revealed that information sharing between police and public hospitals occurred as a matter of practice, and fear of police has prompted drug users to avoid accessing public hospitals in favour of private clinics that are too expensive for many IDU. Thus, the accessibility and affordability of healthcare services were significantly undermined.

At the meso-level, policing practices can also exacerbate the ongoing stigmatization and marginalization of IDU, as well as other inequalities, such as those based on gender, ethnicity, and social class. According to Link and Phelan, “stigma is entirely dependent on social, economic, and political power” (p.375). In this regard, drug policing can constitute a powerful social force that promotes ongoing stigmatization. For example, an ethnographic study in Sydney, Australia showed that policing practices within ethnic minority communities intersected with
racism and aggravated social exclusion. Stigma produces harmful consequences on health. Among people who use drugs, it has been associated with poorer mental and physical health. One pathway through which drug policing and stigma affect the health and well-being of IDU was shown in a qualitative study in Russia, which indicated that aggressive policing practices have contributed to the reproduction and experience of stigma among IDU who, in turn, internalized the stigma as self-blame, lack of self-worth, and fatalism regarding risk, and engaged in drug use to cope with excess stress.

2.3.5 Impacts through macro-level structures

As policing activities are largely shaped by macro-level structures (e.g., drug laws), many of the adverse impacts of drug policing described in this review are arguably attributable to the drug laws that criminalize illicit drug use, among other factors. This review has also identified several features of macro-level structures that serve to augment the production of drug-related harm through street-level policing. Other macro-level factors affecting the health of IDU include the death penalty for drug-related offenses, drug paraphernalia laws that prohibit the sale, purchase, and possession of injection equipment, and laws and policies that undermine harm reduction programs in communities or correctional facilities.

Some countries impose the death penalty for drug-related offenses, including simple possession of illicit drugs. Although Article 6 of the International Covenant on Civil and Political Rights (ICCPR) states that capital punishment may only be applied to the “most serious crimes,” an international review of drug legislation revealed substantial arbitrariness and inconsistency in the definition of capital drug offenses around the world, raising concern regarding the justifiability of such an approach. Moreover, the number of countries that apply the death penalty for drug-related offenses has increased over the past two decades. Although capital
punishment for drug-related offenses is not applied in most countries, the death penalty may be the ultimate consequence of drug policing for IDU.

The harmful effect of drug paraphernalia laws has been extensively investigated in the United States.\textsuperscript{86,126,130,163} In many US states, NSPs are outlawed.\textsuperscript{86} Such laws also manifest themselves in police actions and have limited the availability of tools to prevent the spread of blood-borne diseases among IDU. For example, Bluthenthal et al.\textsuperscript{126} found that IDU who reported fear of arrest while carrying drug paraphernalia were more likely than others to share syringes. An ecological study also found higher prevalence and incidence of HIV in US metropolitan areas where laws prohibit over-the-counter syringe sales.\textsuperscript{163}

Lastly, laws and policies that limit or prohibit harm reduction programs also exacerbate the adverse effects of repressive policing. In Russia, where opioid substitution therapies are banned, treatment options for opioid-using IDU are extremely limited; therefore, IDU will likely continue to use illicit drugs, at the risk of being subjected to police surveillance as well as overdose and other harms.\textsuperscript{69,155,156} Furthermore, despite the well-known risk of HIV and HCV infection in prisons, few countries provide harm reduction services (e.g., NSPs) in detention settings.\textsuperscript{148,164} As detention of IDU is a frequent consequence of aggressive drug policing in many countries, the lack of harm reduction programs in detention settings worsens the harm associated with policing.

2.3.6 Interventions to mitigate the adverse impacts of drug policing

Globally, there has been a range of efforts and recommendations to mitigate the adverse impacts of drug policing on the health of IDU. Since some of the harm that IDU experience through policing activities—such as arbitrary arrests—constitute violations of due process, the provision of legal services to this population can help victims of police abuse obtain redress. In addition, Csete and Cohen\textsuperscript{165}
listed various kinds of legal services that could promote health among IDU. These services include: facilitating access to housing, healthcare, and social services; training non-lawyers as paralegals and “accompaniers” who accompany IDU to court or other places; training IDU to know and assert their rights; documenting human rights abuses against IDU and conducting related advocacy; and convening workshops for police and prosecutors on the legality of health services for drug users. Such legal interventions may help facilitate reforms of police practices. To date, however, few public health researchers have investigated the effects of providing legal services on drug-related harm.\textsuperscript{165}

In some countries, including Britain, Ireland, Australia, and Russia, drug referral schemes have been developed in an effort to assist arrestees who use drugs in entering drug treatment services.\textsuperscript{166,167} Under such schemes, trained counsellors work within police stations and provide arrestees with advice, information, assessment, and referral to drug treatment services. A central aim of such programs is to reduce rates of recidivism by increasing uptake of drug treatment, although they do not offer an alternative to prosecution. Evaluations in Britain showed that a significant number of opiate and cocaine users were enrolled in addiction treatment through such a program.\textsuperscript{166,167} However, the evaluations also highlighted some difficulties in delivering referral services in a police environment, including difficulties in establishing the credibility of the services among drug-using arrestees and resolving tensions between police and drug referral workers.\textsuperscript{166,167}

In recent years, efforts to cultivate police support for harm reduction programs have emerged in many countries where harm reduction was endorsed as a matter of policy or practice.\textsuperscript{166} Examples of these efforts include establishing formal partnerships between police and health agencies,\textsuperscript{168,169} instructing police to not interfere with health and harm reduction services,\textsuperscript{104,170} training police to understand
and support harm reduction programs,\textsuperscript{169,171,172} and allowing police officers to utilize their powers of discretion to support NSPs.\textsuperscript{166} Some of these interventions can be viewed as changing policing approaches from “hot spot policing,” which relies solely on policing measures, to “problem-oriented policing,” which seeks to address problems in a given community through multi-sector collaborations.\textsuperscript{110,168} In the United States, it was reported that police officers were generally misinformed about the legality of syringe purchasing and possession and were concerned about accidental needle sticks for themselves when arresting IDU.\textsuperscript{173} In response, a harm reduction training curriculum that addressed occupational safety issues was developed. The training was shown to significantly improve police attitudes toward syringe access.\textsuperscript{171,172} These reports suggest that exploring police officers’ views and concerns about harm reduction interventions and tailoring training to address the identified barriers are important for changing policing practices on the ground. A positive result of such police-public health cooperation was documented in Vancouver where the police facilitated the use of a supervised injection facility for IDU.\textsuperscript{105} This study indicates that increasing the modalities and coverage of health and harm reduction services in community settings is not only important in itself, but also for supporting effective police-public health cooperation.

Although the aforementioned police interventions have not always been evaluated, available data have pointed out various barriers to implementation, including staff turnover, inconsistent dissemination of harm reduction policy within the police force, variations in public perception of the role of police, and ongoing police corruption.\textsuperscript{82,166,168,174,175} In particular, reports from Vietnam documented that police officers perceived conflicting responsibilities as they were instructed to support harm reduction services and encourage drug users to access voluntary drug treatment while also being pressured to meet quotas for compulsory drug
Observations from a cross-border area of Vietnam and China where governments occasionally implement crackdowns on drug users indicated that fear of police was deeply entrenched in IDU and impeded IDUs’ access to NSPs during crackdowns, even when the local police did not interfere with NSPs. These findings indicate that police training that attempts to align drug policing and public health goals may not be sufficient for reducing IDUs’ vulnerability to poor health without broader structural changes, including abolishing compulsory drug detention.

A number of countries are experimenting with alternative regulatory frameworks for illicit drugs, including decriminalization of personal drug use. While forms of decriminalization vary across jurisdictions, some schemes may remove criminal sanctions from personal drug use and create a legal framework for treating drug use as a public health problem, not a criminal one. Although not all forms of decriminalization schemes have been evaluated, emerging evidence from Portugal—where the possession of small quantities of drugs for personal use and the consumption of drugs has been considered an administrative offence, not a criminal offence, since 2001—suggests that this form of decriminalization of personal drug use has produced some positive results, including reductions in problematic drug use and increases in voluntary enrolment in drug treatment. Calls for decriminalization have also been put forward by the Global Commission on Drug Policy—which includes former heads of state—and the UN Special Rapporteur on the right to health. As changes in the “law on the books” are not necessarily followed by changes in the “law on the street,” further research is needed to investigate how decriminalization has influenced drug policing and a given risk environment surrounding IDU. However, this type of broader structural change will likely serve to reduce the harm associated with incarceration and pre-
trial detention of IDU and may help promote evidence-based drug treatment services and reduce stigma attached to illicit drug use.

2.4 Discussion

This review found that repressive drug policing can harm IDU directly and indirectly through multiple pathways. Within the Risk Environment Framework, street-level drug policing is considered a key feature of the micro-level social environment. This review identified a number of other micro-, meso-, and macro-level risk environment factors that intersect with drug policing activities and produce harm to IDU. At the micro-level, policing activities re-shape drug markets and social and injecting networks of IDU (the social environment) and exert influence on locations where harm reduction and health services are provided and where individuals inject drugs (the physical environment). The meso-level environmental factors that intersect with drug policing and increase IDUs’ vulnerability to poor health include correctional facilities where IDU will be relocated as a result of policing activities (the physical environment), as well as accessibility of health and social services and the stigma attached to IDU (the social environment). The macro-level structures that augment the production of drug-related harm through drug policing include drug registration systems, compulsory drug detention systems, laws that deny welfare benefits to those convicted of drug offenses, laws that impose the death penalty for drug-related offenses, drug paraphernalia laws that prohibit the sale, purchase, and possession of injection equipment, and laws and policies that undermine harm reduction programs in communities or correctional facilities. The health-related harm that IDU experience as a result of repressive drug policing is diverse and includes physical and psychological injuries, perpetuation of drug use, acquisition of infectious diseases,
overdose, and deaths. These consequences also have harmful implications for the communities in which IDU live.

While there is a large body of international literature on this topic, this review identified some gaps in knowledge. First, the majority of the reviewed studies tended to focus on the aggregate effects and consequences of police crackdowns rather than on specific policing tactics. Although some qualitative studies and human rights investigations have shed light on specific police actions that are not only unlawful but may also contribute to other drug-related harm, a smaller number of quantitative studies examined the prevalence and effects of these police actions, including arrests for having syringes or needle marks and syringe confiscation by police. Other tactics that police may commonly employ were not fully evaluated. Examining the effects of specific police actions—and discerning the effects of lawful and unlawful police actions in particular—will be useful for identifying types of interventions required to mitigate the adverse impacts of drug policing on the health of IDU. In particular, if a lawful police action is found to be associated with IDUs’ vulnerability to poor health, reforms of relevant laws and policies need to be discussed.

Second, this review also suggests that combining scientific empirical research evidence with human rights norms and principles would enrich the literature in this field and render it more useful for informing the development of drug policy and programming. In recent years, there have been several statements at the international level that the protection and promotion of human rights need to be mainstreamed in both national and international drug policy. Accordingly, the UNODC has begun to develop a guide to integrate human rights principles in their work. However, public health researchers rarely consider human rights in their empirical research. The value of using internationally agreed human rights norms
includes: linking health issues directly with principles of equity and non-discrimination; setting ethical standards for evaluating policing practices; and providing mechanisms to demand accountability for rights violations to national governments and human rights institutions within the UN. While it is not to say that all public health researchers should incorporate human rights in their work, attention to human rights concerns gives an opportunity for researchers to generate empirical evidence that has both pragmatic and principled implications for policy and programming.

Lastly, the findings of this review also indicates that more research is needed to evaluate the public health impacts of ongoing and emerging interventions that seek to align drug policing and public health goals. Likewise, the impacts of a broader structural change (e.g., decriminalization of personal drug use) on drug policing and public health need to be scrutinized. As some scholars have noted, evaluations of drug policing often focus on “process” measures, such as numbers of arrests and seizure statistics, and not “outcomes.” Although some measures to assess outcomes exist, they tend to focus on reductions in supply of illicit drugs (e.g., the UNODC Illicit Drug Index) or are meant to calculate the monetary value of harm that could be averted through seizing illicit drugs (e.g., the Australian Federal Police Drug Harm Index). Given the findings of this review showing multiple pathways through which drug policing may increase IDUs’ vulnerability to poor health, evaluations of police interventions should also assess the reduction of vulnerability to drug-related harm.

In summary, this review identified numerous ways in which drug policing produces health-related harm among IDU. Although a vast amount of international literature exists in this field, future research should examine the impacts of specific policing tactics on the health of IDU, generate more empirical evidence elucidating
the link between human rights concerns and health outcomes, and evaluate emerging efforts to align drug policing and public health goals.
CHAPTER 3: “HELP WITH THE NATION”: EXPERIENCES WITH DRUG POLICING AMONG PEOPLE WHO INJECT DRUGS IN BANGKOK, THAILAND

3.1 Introduction

As described in section 1.2, Thailand has been contending with longstanding dual epidemics of illicit drug use and HIV/AIDS among IDU. The Thai government has regarded the widespread use of illicit drugs as a “national crisis” and called upon all sectors of society to unite as a “national force” to combat this crisis. Although the 2002 Narcotic Addict Rehabilitation Act B.E. 2545 reclassified people who use drugs as “patients” instead of “criminals,” possession and consumption of illicit drugs remain criminal offenses. Further, the new legislation created a system of compulsory drug detention centres (referred to as bangkap bambat or “forced treatment”) where those charged with illicit drug use are confined and said to undergo “rehabilitation”. However, the majority of these centres are run by the military and lack evidence-based addiction treatment services. Recently, these centres have attracted strong criticism, as twelve UN agencies urged governments around the world to close down such centres.

Since the launch of the compulsory drug detention system, the Thai government has implemented a series of police crackdowns focused on illicit drug use and expanded this system. Most notably, in 2003, a three-month “war on drugs” campaign was launched to suppress drug trafficking and to enrol 300,000 drug users into treatment, mostly through compulsory drug detention. Being pressured to meet mandatory arrest quotas and encouraged to use “harsh” means during arrests, the police reportedly engaged in abusive practices, including more than 2,800 extrajudicial killings of suspected drug dealers and users. Between 2008 and 2011, the national drug policy was revised several times, and the number of people who
use drugs targeted to undergo rehabilitation programs increased from 60,000 in 2008 to 400,000 in 2011. Although the policy emphasizes voluntary access to drug treatment, compulsory drug detention centres remain the principal means to enrol people who use drugs in treatment. In 2010, over 60% of those in drug treatment were placed in such centres. Between September 2011 and August 2012, the number of drug-related arrests increased by 14% compared to the previous year, and more than 330,000 persons were arrested.

Despite concern that recent drug policy developments may have marked a return to the old drug war, few studies have investigated current drug policing practices in Thailand. In addition, although a considerable number of public health evaluations of aggressive drug policing have been undertaken in other countries, it is unknown to what extent these findings are applicable to Thailand, given that the legal, structural, and social environment surrounding drug use differs considerably across settings. Therefore, this qualitative study sought to examine IDUs’ recent experiences with drug policing in Bangkok, Thailand. Our specific study objectives were to characterize the circumstances and social and structural factors leading to encounters of IDU with the police, and to identify policing tactics employed during these encounters as well as the associated health consequences.

3.2 Methods

A qualitative descriptive approach was the methodological orientation underlying the study. Acknowledging that qualitative descriptive designs are typically an eclectic combination of various methods, this study employed a constant comparison analysis that is central to grounded theory to generate knowledge about common patterns and themes within respondents’ experiences.
Qualitative data for this study were generated through in-depth interviews with IDU participating in the Mitsampan Community Research Project, as described in detail in section 1.6. In brief, this study was conducted as part of the larger qualitative study that sought to explore IDUs’ experiences with drug policing, compulsory drug detention centres, and access to HIV testing and care. Between July 2011 and June 2012, potential respondents were recruited from the concurrent quantitative arm of the project as well as through peer-based outreach efforts and word-of-mouth, and were invited to attend the MSHRC or O-Zone House in order to participate in the study. Adults residing in Bangkok or in adjacent provinces who had injected drug(s) in the past six months were eligible for participation. Sampling methods were purposive, and efforts were made to attain balance in age, gender, and HIV seropositivity and to recruit individuals who had encounters with police in the past three years and/or those who had been in compulsory drug detention centres in the past five years.

As described in section 1.6.3, two bilingual Thai research assistants (including the study’s fourth author, SH) were trained by the study’s first and last authors (KH and TK) to conduct in-depth interviews in Thai based on a semi-structured interview guide that the first author developed with guidance from her supervisors and research partners. With regard to encounters with police, the interview guide sought to elicit discussions about: under what circumstances police approached respondents; police’s search-and-arrest procedures during the most recent encounters with police; any negative and positive experiences with police; how the police identify and detain drug users in general; respondents’ reactions to any police misconduct and abuse; the impacts of drug policing on respondents’ drug use patterns, healthcare access, and daily lives. All respondents provided informed
consent and were interviewed by two Thai interviewers. Interviews lasted between 40 and 90 minutes and were audio-recorded.

The data collection and analysis followed an iterative process: throughout the data collection process, the research team discussed the content of interview data as well as the focus and direction of subsequent interviews. Data collection was continued until data reached a point of data saturation (i.e., new respondents’ narratives kept reiterating the same points).

All audio-recorded interviews were transcribed verbatim in Thai and translated into English. The bilingual interviewers who have developed familiarity with terms used among local IDU reviewed the translated transcripts for accuracy. Further, a native English-speaking proof-reader with an excellent knowledge of both Thai and English also verified the English transcripts for grammatical accuracy and nuance by comparing the English transcripts with Thai transcripts and audio-files.

In-depth interview data were analysed to identify the circumstances and situational factors surrounding and leading to police encounters as well as to identify and analyse policing tactics employed during these interactions, particularly with respect to international human rights norms for policing. We also analysed respondents’ actions and behaviours after the police encounters, and any subsequent health consequences. All data were entered into Atlas.ti (version 6.2), software designed to assist qualitative data management and analyses. Data analysis was informed by the Risk Environment Framework,\textsuperscript{79,80} which posits that a range of social, political, economic, and physical environmental factors interact each other and shape the production of drug-related harm. Given that the past “war on drugs” campaign resulted in numerous human rights abuses in this setting, the analysis was also informed by the work of Jürgens et al.,\textsuperscript{98} which asserts that rights violations also constitute core features of risk environments surrounding drug use.
Data analysis was conducted inductively, employing a multi-step thematic analysis. On the first pass, the primary author created an initial set of codes. The initial codes included the time and place of one’s encounters with police, ways in which police officers approached respondents, the nature of the police actions, reporting of police misconduct to local authorities, and changes in the respondent’s behaviour due to police activities. Subsequent reviews involved refining the codes and assigning data segments to categories with substantive input from other co-authors. The analysis considered the range and diversity of respondents’ experiences, as well as negative evidence in each category of experience. According to the modified Risk Environment Framework described in section 1.4, the codes indicating factors surrounding and leading to police confrontations and influencing respondents’ behaviour were categorized as individual characteristics, micro- and meso-level social and environmental factors, and macro-level structures. Police actions were labelled as lawful or unlawful and analysed with respect to international human rights norms for policing. Finally, the data were grouped into three parts in chronological order: circumstances of police confrontations, police violence and misconduct, and IDUs’ reactions to drug policing practices.

3.3 Results

In total, 42 IDU were interviewed for this study, including 17 (40.5%) women. The median age was 35.5 years (range: 23 – 52 years). Table 1 summarizes the respondents’ demographic characteristics, drug-using behaviour, and self-reported HIV status. All respondents reported interactions with police during the three years before the interviews.

As presented in sections 3.3.1–3, various factors surrounding and leading to police confrontations have been identified from respondents’ accounts. In brief, macro-structural factors that appeared to shape police activities included the 2011
state-sponsored, large-scale police crackdown; changes in drug laws that enabled police officers to use rapid urine drug testing; the deployment of civil volunteers in drug policing; and the focus on young people, as stated in drug policy documents. The meso-level social and environmental factors that characterized the respondents’ experiences with police included police corruption, financial incentives within the police, and strategic police surveillance (e.g., focusing on “red zones”). Other meso-level social factors were identified as significant barriers to seeking justice, including a lack of confidence in the rule of law and poor availability of legal services. The micro-level social and environmental factors included intense police surveillance near methadone clinics, as well as by civil volunteers. Respondents perceived some individual characteristics—including being young and having criminal records—as increasing one’s chance of being approached by the police. Respondents’ narratives indicated that many of these factors interacted with each other and often resulted in severe human rights abuses. Respondents’ reactions to policing were also shaped by the multiple levels of social, structural and environmental factors, and they increased vulnerability to poor health through various pathways.

3.3.1 Circumstances of police confrontations

Respondents noted that drug policing during the past three years was experienced as recurrent waves of crackdowns on people who use drugs. It was reported that policing activities had noticeably intensified since rapid urine toxicology screening became widely available to police.

R: [The police] have become more repressive these days. Now they insist on urine testing! In the past, all they did was to check our arms to see if we had needle marks. Okay, that’s like red-handed. But now they can arrest us for having drugs in our body. Is my urine illegal now? Isn’t this too much? (Respondent #27, female, age 32)
Respondents also perceived greater police pressure since the government initiated a large-scale crackdown on drug users in 2011. In particular, the local police appeared to be pressured to make arrests towards the end of the year 2011 when they needed to submit the arrest records to the authority.

R: Towards the end of the year [2011], the police needed to submit records to higher-ups, right? So, they wanted to look impressive. This police officer knew us for long time. He came to us and said, “Hey! You come help with the nation!” Then, he put us in a jail for nothing for a week. He said it was for the nation. (Respondent #35, female, age 50)

During the 2003 “war on drugs” campaign, the police had to fill arrest quotas and were rewarded for making drug-related arrests. Although it is unknown from publicly available information whether mandatory arrest quotas were still in place under the subsequent drug policies, according to the ONCB (Sirisabphaya A, written communication, April 2013), a cash reward system does remain in place for confiscation of drugs. Respondents suggested that financial incentives stimulated the police to make drug-related arrests.

R: There is a price on each person’s head. It’s like a quota coming down to each police station. And they get money when they make an arrest … It’s their system. I really don’t think it’s right. It’s just for the money. (Respondent #16, male, age 35)

Respondents described various overt and covert surveillance methods employed by police officers to identify drug users. Many police officers reportedly wore plain clothes at work. Some respondents also reported that ONCB officials engaged in arresting drug dealers. Although the majority of respondents claimed they could immediately identify a plain-clothes officer by his/her appearance, some respondents reported confusion because these plain-clothes officers sometimes
demanded a search without identifying themselves as police, and at the same time would not show identification when asked. One account noted that in this situation an unscrupulous person could pretend to be a policeman and position himself to rob an IDU.

R: When I was at a methadone clinic, three young guys came to me and said, “Won’t you sit down and talk to the police?” They were actually new police officers that I’d never seen before. So, I asked, “Sit down for what? Can I see your ID?” Then, they said, “Hah! Are you a smart ass?” I’d met someone who pretended to be a police officer and robbed me of some stuff. That’s why I asked for ID. But he said I was a smart ass! (Respondent #24, male, age 46)

One of the most frequently cited police surveillance methods was roadside checkpoints. These checkpoints were set up in diverse locations at various times but were most common at night and in “red zones,” which denote districts in which many drug dealers and users are believed to congregate, including “slum-like neighbourhoods” (respondent #1, male, age 37).

R: These days the police have increased their efforts to find and arrest us. My place is in a red zone. It’s a dangerous zone. They put up campaign signs and often set up checkpoints. (Respondent #15, male, age 43)

Police surveillance was also reported to be common around methadone clinics, presumably to take advantage of the volume of drug users coming and going from these venues. Several patients in methadone treatment reported that the police threatened to send them to compulsory drug detention centres:

R: After taking methadone, I was sitting in front of the clinic with my friends. Then, 3-4 police officers came, saying “Hey, you! Come over here! If we find drugs in your urine, what do you want us to do?” I said, “Sir, you can’t find anything because we don’t use yaba or ice [i.e., methamphetamines].
We’re patients taking methadone everyday.” Then, they said, “If your urine comes out positive, you’ll be sent to ‘treatment’ [i.e., compulsory drug detention centres] right away!” So, I said, “Such ‘treatment’ can’t treat drug users.” Then, they said, “Bastard! You think you’re a smart ass?” (Respondent #25, male, age 41)

Respondents perceived that several individual factors made them “look like drug users” or otherwise increased the chance of being subjected to stop-and-search procedures by the police. These factors included being known to the local police as a drug user (e.g., those with criminal records), being young, having visible tattoos or needle marks, and looking nervous. Many respondents shared a belief that tattoos signified that a person had been in prison and were indicative of being a drug offender.

I: Why do you think the police stopped you three times in a month?
R: I have lots of tattoos. The police like to keep an eye on guys with tattoos. …People think we’ve been in prison. Good people don’t have tattoos. Only ex-cons do! (Respondent #13, male, age 36)

In addition to roadside stop-and-search surveillance, police often relied on information supplied by drug users or local residents to identify potential offenders. For example, some respondents were forced by police to identify known drug dealers (“to be a finger for the police”). However, all of them reported that they refused to “be a finger” out of fear of retaliation and distrust from drug dealers and other drug users.

R: [The police officer] also wanted me to be a ‘finger’ for him. If I did that, he would let me go. It was like an exchange. So, I said that I’d give him information on where the drug dealer lived. But I didn’t give him real information. I just randomly
picked a house in the neighbourhood. (Respondent #35, female, age 50)

As the Thai drug authorities have ordered local authorities to engage civilians in identifying people who use drugs, respondents’ narratives indicated that anyone in the neighbourhood could be “a finger for the police.” Also, it was reported that during crackdowns, local residents volunteered to assist police officers with finding drug offenders.

R: I was standing on a street, waiting for the stuff [drugs]. Then, a big bus drove by. There were about 10 police volunteers in there. They said, “Stay still! Don’t move!” Then, they took me to a police station to do a urine test.

I: But they weren’t police officers, were they? Why did you feel that you had to follow them?

R: They were locals and called themselves volunteers. And it was a crackdown. I already knew how it would go.

(Respondent #30, female, age 33)

One consequence of being identified by the local police as a drug user was a police raid on one’s home, sometimes after midnight. Respondents who were raided in their homes tended to experience it more than once.

R: …They know where I live! They know they will get me. So, they keep coming… I’m scared. I was sent to prison eight times! I don’t wanna go there again. I’ve never been arrested outside my house. They always get me at my house.

I: Why do the police come to your house so often?

R: It could be because some people reported on me. I don’t know. But when they come, they say, “People reported on you. So, we are here to arrest you!” …Some people in my community love me, but others hate me. (Respondent #17, male, age 23)

R: …5-6 undercover police officers. They came at night. I was going to bed at that time. They break in whenever they want! They even climbed over the wall!
I: They weren’t wearing a uniform, right? Weren’t you surprised at having 5-6 strangers climbing into your house? Didn’t you think that they were thieves?

R: Thieves wouldn’t climb into my house. But the police would do. So, I knew they had to be the police.

I: When they came in, what did they say?

R: They just told me to put on my clothes and come with them to the police station to do a urine test. (Respondent #18, male, age 29)

3.3.2 Police violence and misconduct

Respondents described various forms of police violence and misconduct that they experienced first-hand. Some respondents known to local police officers as drug users reported that they were coerced into “helping” the country by admitting guilt to false charges.

R: They said, “Help with the nation with some work! What charge do you want?”

I: Did they find any drugs on you when they said that?

R: No! But I knew what charge I should go for. So, I picked the one with the minimum sentence.

I: Did they let you pick a light charge?

R: Mostly they do, because that way, they can arrest you again after you’ve been released. (Respondent #26, male, age 36)

Many respondents reported that police would immediately search their bodies or belongings, often in degrading ways. Possession of drug paraphernalia was experienced by some respondents as grounds for arrest, despite the National Police Office’s memorandum instructing that it should not be done. In the absence of illicit drugs or drug paraphernalia, respondents were often forced to undergo urine toxicology testing. Stop-and-search and drug testing procedures typically took place in public places, which some respondents felt caused unnecessary humiliation:
R: There were people walking around. They wanted me to pee in a corner. There was nowhere to hide. Isn’t that nasty? It’s not at all proper. They could have let me find a more discreet place. Passers-by looked at me and knew what I was doing. Women giggled. (Respondent #10, male, age 35)

R: First, [two male police officers] searched inside my bag. There was nothing in it. Then, they told me to take off my bra, right in front of the Soi [i.e., street]! (Respondent #29, female, age 23)

A number of respondents reported that police attempted to extort money from them, particularly when the results of drug testing were positive. In many cases, the respondents were presented with an opportunity to provide a bribe and negotiate with police for lighter charges or avoid the charge altogether. The negotiation was initiated by either the person detained or the police, who may cite a specific monetary value or goods (e.g., a bottle of whiskey) in return for a bribe.

R: They asked, “How much money do you have?” I asked, “Will a thousand do?” They said, “Two thousand.” So I gave them 2,000 baht [i.e., approximately US$ 66]. Then they told me to fill out a form saying that I was arrested for not carrying my driver’s licence. Because they brought me to the police station, they had to charge me with something. (Respondent #21, male, age 30)

R: If your urine turns purple, but you have money and want to negotiate with them, the urine is magically no longer purple. This is what happens in most cases. (Respondent #1, male, age 37)

When the results of drug testing were negative, several respondents stated that they were falsely accused, had evidence planted on them by police, or were coerced into confessing to a crime that they did not commit (e.g., theft). Some
respondents reported that they were compelled to sign a blank sheet and were not informed of the charges they faced until at a later stage.

R: He just handed me a letter to sign. I thought it was paperwork for a urine test. Then he said, “Here! The charge has been changed from drug use to stealing. Otherwise you would have been sent away for a long time this time. You wouldn’t have the money to bail yourself out. Just think of it as a favour. Or do you want me to charge you with something heavier?” (Respondent #27, female, age 32)

Excessive use of force was also reported as another means frequently employed by police to extract a confession from a detainee. Respondents asserted that these confessions were often false. The methods used by police included beating or kicking suspects, sometimes combined with a physical restraint (e.g., handcuffs), electric shock, and being soaked in ice water.

R: When we arrived at the precinct, they gave us a blank sheet of paper to sign. We had the ‘blank paper treatment’ before. So we knew! I told them, “Sir, we can’t sign on a blank sheet of paper. If you don’t let us read it first, we won’t sign.” Then, six or seven officers took me into a small room. It was a sound-proof glass room...Then, they kicked me. Thud! Thud! Then, they wrapped me with a blanket and blasted the air conditioner. They soaked me with icy water... I was shaken up so badly. They did that to me for three hours. (Respondent #25, male, age 41)

3.3.3 IDUs’ reactions to drug policing practices

Despite having experienced police abuse, the majority of respondents reported that they were reluctant to report these experiences to the authorities or seek justice. Many respondents reported feeling powerless in relation to police, and felt discouraged and intimidated by the police officers’ disregard for their rights:
R: The police don’t give you any respect. If you talk about your rights, you’ll just end up getting hurt. Even though the law supports your rights, the police will think you’re a know-it-all. They may have it out for you. (Respondent #34, male, age 35)

Other respondents reported police corruption and fear of retaliation from the police as being important barriers to obtaining redress.

R: In my district, people from this political party abuse the power. If they don’t like anyone, they would tell the police to take care of the person. And the police would do anything to put this person in a jail. They can do it even when this person hasn’t committed any crime. They are much more powerful than we are. To make it simple, they have money. How can we fight against them? Do we have money? No. (Respondent #35, female, age 50)

R: I wanted to report it [that her partner was beaten by police during the interrogation] to the Chief Inspector. But my boyfriend and his mom told me to just let it go. They were afraid that it wouldn’t end well if I reported it to the police.
I: What do you mean?
R: They were afraid that the police might think that we brought too much trouble. The police might do something to us. (Respondent #36, female, age 37)

In addition, respondents reported barriers related to the judicial system and processes, including limited knowledge about or access to legal services, slow judicial proceedings, and fear of detention while awaiting a trial. One respondent recounted a three-year-long court fight against a false accusation. Furthermore, respondents believed that a previous drug conviction meant that they could not win a court case over police misconduct or prove their innocence. One respondent reported that a court-appointed lawyer even advised that he accept a false charge rather than fight it:
R: The court-appointed lawyer said that a confession would make things easier, but if I chose to fight, it would be a long fight. He didn’t have any other suggestions for me. He probably thought I wasn’t in a position to fight this false charge because I had a previous record [drug-related charges]. So, I was doomed to lose. (Respondent #9, male, age 34)

As a result of numerous and repeated negative interactions with the police, the majority of respondents employed strategies to avoid the police. Common strategies included retreating to one’s house or a new location outside “red zones” and making changes to drug use behaviours. Many of these tactics appeared to have negative impacts on respondents’ health and well-being.

The simplest strategy for avoiding police was to refrain from going outside where one could be subjected to police scrutiny. This strategy often impeded respondents’ access to healthcare, including methadone clinics.

I: Are there any other reasons that make you feel like you don’t want to go to the doctor?
R: Yes, I’m scared of the police checkpoints in the area. I could go during rush hour. But if it’s a little later, I don’t want to go. (Respondent #21, male, age 30)

R: When they [the police] were campaigning against drug use, we couldn’t even get into the methadone clinic. We had to wait. And we couldn’t hang around there and let them see us either. They would often wait for us along the routes we use. I’ve run into trouble with them two or three times. (Respondent #5, male, age 50)

Some respondents also reported that they changed the venues where they used drugs, resorting to injecting drugs alone in more discreet locations, while others engaged in hurried injections out of fear of being detected by the police.
R: I inject drugs mostly at gas stations. I hurry in and hurry out because it’s dangerous. Sometimes the police check these places, and if the staff at the gas station sees me go in there [to the bathroom] for a long time, they may call the police. So, I have to do it fast. (Respondent #15, male, age 43)

Respondents noted that police actions also sometimes led them to change the types of drugs they consumed. Many respondents believed that the rapid urine screening kits used by the police detected the presence of methamphetamines only, so they stopped using methamphetamines and shifted to other drugs, including midazolam, a short-acting benzodiazepine that can be obtained from private clinics.

R: I’ve definitely stopped using ice [crystal methamphetamine] and meth. Urine tests only test for meth. So now I only inject heroin and Dormicum [midazolam]. (Respondent #14, male, age 32)

Finally, some respondents did not report any strategies to avoid police confrontations but felt concerned and anxious about the intensive and endless police pressure. These individuals reported either becoming fatalistic about the risk of police encounters and the associated harms or engaging in drug use to cope with the excessive stress.

R: I’m paranoid about the police. Every day when I’m at home, I don’t feel like going to bed… The “puyai” [i.e., elders] in my neighbourhood all know whether I have drugs or not, and the police will come and take me. …But I have to just let it go. Whatever happens happens. (Respondent #18, male, age 29)

R: [The police] stress me out. They make me feel like using [drugs] so that I can forget about them! It’s as simple as that! (Respondent #22, female, age 47)
3.4 Discussion

This study of IDUs’ lived experiences suggests that drug policing in Bangkok is characterized by severe injustices, grave human rights abuses, and entrenched corruption. Consistent with a large body of literature from several settings, aggressive policing practices in Bangkok appear to have compromised the health of respondents in many ways. Human rights abuses included violations of due process and discriminatory practices. Respondents’ narratives indicated the targeting of former drug users for arrest in the absence of evidence of new offenses. Such practices directly undermine the credibility of the criminal justice system and people’s confidence in the rule of law. In the face of such abuse, it is not surprising that respondents were reluctant to seek justice or redress from the same system that generated such injustices.

A notable finding of this study is evidence of harm related to the use of rapid urine testing by police. In Thailand, the 2000 amendment of the Narcotics Control Act (Section 14) and the 2003 amendment of the Narcotics Act (Section 58/1) allowed law enforcement officers to perform drug testing on anyone based upon “reasonable suspicion.” According to the ONCB (Sirisabphaya A, written communication, April 2013), the police use two kinds of rapid urine screening kits (one screening methamphetamines only and the other screening multiple drugs). Use of this tool empowered police to identify drug offenders even when they were not in possession of illicit drugs or in the act of using drugs. The experiences recounted here indicate abusive use of this tool: people were forced to urinate in public places, and the police used positive test results as a means of extortion. Furthermore, many respondents believed that police tested only for methamphetamine, leading some to transition from methamphetamines to midazolam use. Midazolam injection is associated with elevated risk of severe injection-related complications, such as nerve
and vascular injuries.\textsuperscript{188,190} Echoing earlier results from other police practices in Sydney, Australia,\textsuperscript{74} these findings suggest that potential gains from disrupting the use of certain illicit drugs may be offset by the harm associated with the misuse of other drugs, as policing forces changes in drug-using behaviours.

Our findings shed light on a number of social and structural factors contributing to the observed rights violations. Respondents perceived increasing police pressure in 2011 when the Thai government substantially increased numerical targets for drug treatment enrolment.\textsuperscript{43,44} The police take the number of new admissions to drug treatment as an indicator of success of the drug policy,\textsuperscript{45} where drug “treatment” primarily means being sentenced to compulsory drug detention.\textsuperscript{27,39} Drug police in Thailand were also given financial incentives to fill arrest quotas during the 2003 drug war.\textsuperscript{22} Our respondents’ accounts and available information,\textsuperscript{47} including that from the ONCB (Sirisabphaya A, written communication, April 2013), indicate that a cash reward system has persisted. Given the low salaries of police officers in Thailand,\textsuperscript{50} these incentives appear to promote aggressive and corrupt policing practices. These features of Thai drug policing may help explain why some individuals who were known to the police had their homes raided many times, why some methadone patients were harassed by police near methadone clinics, and why some had drugs planted on them and were coerced to confess to crimes they did not commit. As suggested by some respondents, it may also be that the police intentionally charged people with lesser offenses so that they would be released and available for re-arrest to help inflate arrest figures. Our findings illustrate how macro-structures (e.g., state-sponsored, large-scale police crackdowns) are translated into meso-level social and environmental factors (e.g., financial incentives within the police) and shape police activities, as well as how police activities interact with other meso-level social and environmental factors (e.g.,
police corruption), micro-level social and environmental factors (e.g., intense police surveillance near methadone clinics) and individual characteristics (e.g., having criminal records and being known to the local police) and result in human rights abuses of IDU in Bangkok.

Respondents’ narratives indicate that drug policing in Bangkok involves severe human rights abuses. Evidence planting and false accusations represent a violation of the right to freedom from arbitrary arrest and detention under Article 9 of the ICCPR, which Thailand ratified in 1996. In some cases, respondents reported that police used physical force to coerce confessions. This practice is a violation of the rights to security of the person (Article 9) and to freedom from torture and cruel, inhuman, and degrading treatment (Article 7) under the ICCPR, as well as under the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT), to which Thailand became a party in 2007. These rights are also enshrined in the 2007 Constitution of the Kingdom of Thailand B.E. 2550 (Section 32). Consistent with studies from other countries, our findings suggest that police presence and harassment near methadone clinics deterred methadone patients from accessing treatment. This type of targeted police interference with access to essential health services is a violation of the right to the highest attainable standard of health enshrined in the International Covenant on Economic, Social and Cultural Rights (ICESCR, Article 12), to which Thailand became a party in 1999.

In addition, the findings indicate that police corruption and other police misconduct further contributed to IDUs’ vulnerability to drug-related harm. The majority of respondents experienced extortion of money by police. This is consistent with a previous study from this setting reporting that half of IDU who reported having drugs planted on them paid police a bribe to avoid arrest. Respondents also reported arrests for syringe possession and needle marks; such arrests have been
found in several settings to facilitate risky injection behaviour and impede access to healthcare. Respondents’ accounts that plain-clothes police did not always identify themselves as police were concerning, not only because this practice is unlawful under the Narcotics Act (Section 49), but also because respondents were reluctant to exercise their right to ask for identification. In addition, our findings highlight possible abuse associated with “deputizing” local residents to help the police identify alleged drug offenders. Particularly where police are not always in uniform, deputized civilians may be mistaken for police or may overstep their authority, leading IDU to flee, hide or otherwise respond in ways that may be risky to them and those around them. Mobilization of civilians of this kind has also been reported in Laos and Vietnam, where many civilians (e.g., heads of villages) are compelled by local authorities to help achieve “drug-free” environments and submit drug users to the police or compulsory drug detention centres.

Our findings also suggest that policing practices disproportionately affected some persons, particularly former drug offenders. Even though there is no drug user registration system in Thailand, as there is in many eastern European countries, in practice the Thai police reportedly maintain “blacklists” of suspected or formerly convicted drug dealers and users. These lists seem to serve effectively as a registration system and similarly increase the vulnerability of those listed to police abuse and extortion. In addition, police target people with tattoos, which are taken as markers of former incarceration. This practice likely violates the principle of non-discrimination under Article 26 of the ICCPR and Section 30 of the Thai constitution.

It is particularly concerning that many respondents who experienced police abuse were forced to bear this abuse in silence for various reasons. In accordance with its international human rights obligations, Thailand has a legal framework that
prohibits state corruption, prohibits the use in court of evidence obtained through unlawful means, and grants victims of torture the right to seek redress and compensation. However, investigations of police abuses committed under the 2003 drug war have not been completed, indicating a political unwillingness to bring the perpetrators of these heinous abuses to account. This is likely contributing to respondents’ reluctance to seek justice. Our findings underscore repeated calls for ensuring full accountability for police abuses. Given the observed lack of knowledge and access to legal services among the respondents, greater efforts should also be made to provide legal services to IDU in Bangkok. A recent review highlighted that legal services are often as important as health services to safeguard the rights and well-being of people who use drugs.

While ensuring the accountability for police abuses is an imperative duty of the Thai government, our findings also suggest a need for multilevel structural changes and interventions to mitigate the harm associated with drug policing in Thailand. These include abolishing numerical targets for drug treatment enrolment that effectively promote compulsory drug detention, banning financial incentives and blacklists to reduce the potential for abusive practices, establishing binding commitments from the police not to interfere with health and harm reduction services, and training police to understand harm reduction activities. Globally, the latter two interventions have been applied in many settings and have faced such challenges as high turnover among police, varied public perceptions of the role of police, and police corruption. In particular, reports from Vietnam documented that a macro-level drug policy that emphasized compulsory drug detention as a means to address illicit drug use has pressured police to arrest drug users and has undermined the effectiveness of these police interventions aimed at supporting harm reduction services.
Repressive and harmful drug policing is largely attributable to harsh application of criminal penalties to a wide range of drug offenses. In recent years, a number of countries have experimented with alternative regulatory frameworks for illicit drugs, including decriminalization of personal drug use. Decriminalization has a number of potential benefits to public health, including reducing harms associated with incarceration and pre-trial detention of drug users and facilitating the scale-up of evidence-based drug treatment services for those who need them. Given some emerging evidence of positive results, these alternative frameworks are worth exploring in Thailand.

Lastly, clear ethical standards need to be established to safeguard against abusive practices related to the police’s use of drug testing. While drug testing is used in many settings, including healthcare settings, workplaces, schools, and correctional facilities, there is scant literature to inform the development of humane and pragmatic guidelines for drug testing by police, which are sorely needed. In recent years, following the model of roadside breathalyzer alcohol tests, some European countries have authorized roadside drug testing (by means of oral fluid, urine, or sweat tests) to identify drivers under the influence of drugs. Some countries have legal provisions stipulating that sanctions should be based on the impairment of driving ability by substance abuse, not on the analytical detection of drugs in body fluid. The majority of the countries recognize that any roadside testing procedure can be an intrusion into individual rights and, therefore, they take some measures to respect voluntariness and privacy (e.g., using a sanitary van for urine tests). These experiences, particularly valuing the voluntary nature of drug testing, may be useful to inform developing ethical and rights-friendly drug testing practices in Bangkok.
This study has several strengths that served to enhance the credibility of results. The primary author has coordinated the Mitsampan Community Research Project at the MSHRC since 2008 and has spent over 1,500 hours conducting fieldwork. These periods of time provided numerous opportunities to observe and discuss issues related to drug policing at the MSHRC, and helped the author develop an early familiarity with relevant issues and build rapport with local IDU. Although some scholars have noted that the prolonged engagement in the field may lead researchers to develop some biases, the involvement of other researchers in the data analysis served to maintain the integrity of the analysis. Given that IDUs’ experiences with police involve sensitive information, extra efforts were made to assure confidentiality and anonymity of responses and to encourage respondents to be frank. For example, all interviews were conducted in private space, any personally identifiable information was not collected or was removed from the data, and interviewers emphasized that the study had no connection with the state authorities. Further, interviewers frequently used probes to elicit detailed data and iterative questioning to verify the accuracy of data and provide respondents with opportunities to check the data.

However, the following limitations should be noted when interpreting the findings. First, the interview transcripts were translated into English and then analyzed. Although the interviewers and proof-readers reviewed the translated transcripts (and SH reviewed this manuscript), linguistic nuances that were relevant to the study may have been lost in translation. Second, our findings are based on interviews with IDU who had direct encounters with police in the previous three years. Therefore, experiences and views of non-IDU or other IDU who did not confront police officers were not included. In addition, those who came forward to participate in the study may have tended to have negative experiences with police.
Although efforts were made to attain a balance in gender and age among the interviewees, we could not meaningfully reach sub-populations of IDU who also belonged to other vulnerable populations, including transgendered persons, migrants, and sex workers. These features of our sample limit the transferability of the present findings.
Table 1: Characteristics of 42 IDU in Bangkok, Thailand, participating in the qualitative arm of the Mitsampan Community Research Project between July 2011 and June 2012

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female gender</td>
<td>17 (40.5%)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>≤ 30 years</td>
<td>7 (16.7%)</td>
</tr>
<tr>
<td>31 – 40 years</td>
<td>21 (50.0%)</td>
</tr>
<tr>
<td>&gt; 41 years</td>
<td>14 (33.3%)</td>
</tr>
<tr>
<td>Drugs most frequently injected*</td>
<td></td>
</tr>
<tr>
<td>Midazolam</td>
<td>30 (71.4%)</td>
</tr>
<tr>
<td>Heroin</td>
<td>17 (40.5%)</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>13 (31.0%)</td>
</tr>
<tr>
<td>Crystal methamphetamine</td>
<td>10 (23.8%)</td>
</tr>
<tr>
<td>Methadone</td>
<td>4 (9.5%)</td>
</tr>
<tr>
<td>Self-reported HIV seropositivity</td>
<td>14 (33.3%)</td>
</tr>
</tbody>
</table>

IDU: people who inject drugs.
* Refers to the 6 months prior to the interview. Multiple answers were allowed.
CHAPTER 4: REPORTS OF POLICE BEATING AND ASSOCIATED HARMs AMONG PEOPLE WHO INJECT DRUGS IN BANGKOK, THAILAND

4.1 Introduction

As described in section 1.2, in 2002 Thailand enacted a new law that reclassified people who use drugs as “patients” not “criminals.” However, the criminal laws governing drug use remain in effect, and the Thai government has continued to support intensive police crackdowns, as well as compulsory detention and incarceration of people who use drugs. During the Thai “war on drugs” in 2003, the government’s strong emphasis on drug suppression efforts led the Thai police to commit various forms of violence, including over 2,800 extrajudicial killings of alleged drug dealers and users. Although the Thai government promised that the police would not breach due process or use excessive forces again (according to a media report), recent reports suggest that police misconduct has continued during subsequent crackdowns. For example, a 2008 study showed that almost half of a sample of IDU in Bangkok reported having drugs planted on them by police. Further, other reports documented police misconduct and fatal shootings of suspects during drug suppression operations in 2012.

Despite ongoing concern regarding the renewed and intensified crackdowns on drug use in Thailand, few studies have endeavored to identify the extent and impact of police violence among IDU in this setting. Although many detailed narratives on police violence were documented during the “war on drugs” in 2003, few studies have been undertaken in the post-2003 period. As well, while international literature indicates that aggressive drug policing practices increase vulnerability to HIV infection and other harms among IDU, these studies have tended to focus on the aggregate impact of police crackdowns of relatively
short duration, and the impact of specific forms of police misconduct has seldom been quantified. Therefore, we sought to identify the prevalence and correlates of experiencing police beating among a community-recruited sample of IDU in Bangkok, Thailand.

4.2 Methods

Quantitative data for this study were derived from the Mitsampan Community Research Project, as described in detail in section 1.6.

In this study, we included respondents who completed the interview in 2009 or 2011. Given that some individuals were interviewed in both 2009 and 2011, we included all respondents from the first wave and only new respondents from the second wave in order to ensure the independence of the observations analysed in the present study. As described in section 1.6.2, this was the only way to eliminate repeat respondents from the data set. The sample of each survey wave was further restricted to individuals who had complete data for the present analyses. For the present analyses, the primary outcome of interest was reporting a history of police beating, defined as answering “Yes” to a question: “Have you ever been beaten by police?” In addition, in 2011 a follow-up question was added to the survey, which asked respondents reporting episodes of police beating about the circumstances of police beatings (e.g., where and when they occurred). Although many forms of police violence exist, police beating was selected as the primary outcome of interest because it was identified as one of the major forms of police violence by a group of peer researchers during the process of developing survey instruments, and yet little was known about the prevalence and correlates of experiencing police beating among IDU in Bangkok.

Informed by the conceptual framework (Figure 1) and previous studies exploring the impacts of aggressive drug policing on IDU, explanatory
variables that were hypothesized to be potentially associated with the outcome were selected. They included age (below or above median age: < 37 years vs. ≥ 37 years); gender (male vs. female); drug-dealing involvement in the past six months (yes vs. no); injection of each of the four kinds of drugs that are commonly used among IDU in Bangkok: heroin, midazolam (a short-acting benzodiazepine), methamphetamine (locally called yaba), and crystal methamphetamine (locally called ice); ever incarcerated; ever in compulsory drug detention; ever accessed methadone treatment; reporting barriers to accessing healthcare (any vs. none); ever shared syringes; HIV serostatus (positive vs. negative or unknown); non-fatal overdose ever; and calendar year of study enrolment (2011 vs. 2009). All variables were coded dichotomously as yes vs. no, unless otherwise stated. All variables related to drug-using behaviour referred to any time in the past. Drug-dealing involvement was ascertained by asking whether drug dealing (i.e., selling or transporting illicit drugs) constituted a source of personal income for the respondent in the past six months. As in our previous work, our barriers to accessing healthcare variable incorporated a range of potential barriers, including but not limited to: fear of sharing information of drug using status with the police, not wanting healthcare providers to know one injects or uses drugs, being treated poorly by healthcare providers, and transportation issues.

For the bivariate and multivariate analyses, the prevalence ratio rather than the odds ratio was used as a measure of association, as the frequency of the outcome exceeded 10%. First, we used a simple binomial regression with a log link function to examine bivariate associations between reports of police beating and the explanatory variables. Next, we used an \emph{a priori}-defined statistical protocol based on examination of the Akaike Information Criterion (AIC) and \(p\)-values to construct an explanatory multivariate log-binomial regression model using the COPY method
First, we constructed a full model including all variables analysed in bivariate analyses. After examining the AIC of the model, we removed the variable with the largest p-value and built a reduced model. We continued this iterative process until no variables remained for inclusion. We selected the multivariate model with the lowest AIC score. Because age, which was not significantly associated with the outcome at the \( p < 0.05 \) level in bivariate analyses, became significantly associated with the outcome in the full multivariate log-binomial regression model, we assessed two-way interactions between median age and the explanatory variables by creating interaction terms. Interaction was deemed as present if the interaction term was associated with the outcome at the \( p < 0.05 \) level. All p-values were two-sided.

As a sub-analysis, we used descriptive statistics to examine at what point during interactions with police that respondents experienced beatings. All statistical analyses were performed with SAS version 9.3.

### 4.3 Results

Among 644 unique IDU recruited between June 2009 and October 2011, 639 individuals (307 individuals in 2009 and 332 individuals in 2011) had complete data and were eligible for inclusion in the present analyses. The median age of eligible respondents was 37 years (interquartile range: 33–47 years), and 153 (23.9%) were female. In total, 240 respondents (37.6%) reported having ever been beaten by police, and 21 (3.3%) reported having been beaten by police in the past six months. The unadjusted prevalence of experiencing police beating was 31.3% in 2009 and 43.4% in 2011.

The results of bivariate analyses are shown in Table 2. Reports of police beatings were significantly and positively associated with male gender (prevalence ratio [PR]: 5.50; 95% confidence interval [CI]: 3.24 – 9.33); heroin injection ever
2.45; 95% CI: 1.45 – 4.15); midazolam injection ever (PR: 1.52; 95% CI: 1.10 – 2.10); crystal methamphetamine injection ever (PR: 1.47; 95% CI: 1.17 – 1.84); ever shared syringes (PR: 1.93; 95% CI: 1.52 – 2.45); ever incarcerated (PR: 3.00; 95% CI: 1.98 – 4.56); ever in compulsory drug detention (PR: 1.33; 95% CI: 1.06 – 1.66); ever accessed methadone treatment enrolment (PR: 1.74; 95% CI: 1.30 – 2.33); reporting barriers to accessing healthcare (PR: 1.55; 95% CI: 1.25 – 1.93); HIV seropositivity (PR: 1.35; 95% CI: 1.08 – 1.67); non-fatal overdose ever (PR: 1.60; 95% CI: 1.32 – 1.95); and study enrolment in 2011 (PR: 1.39; 95% CI: 1.13 – 1.71).

Table 3 shows the results from the final multivariate log-binomial regression model. As shown, an interaction was found with age and methamphetamine injection ever. Reports of police beatings were independently and positively associated with younger age (< 37 years) among those who never injected methamphetamine (adjusted prevalence ratio [APR]: 1.69; 95% CI: 1.17 – 2.43); male gender (APR: 4.43; 95% CI: 2.63 – 7.49); ever shared syringes (APR: 1.44; 95% CI: 1.15 – 1.80); ever incarcerated (APR: 2.51; 95% CI: 1.68 – 3.77); ever in compulsory drug detention (APR: 1.22; 95% CI: 1.05 – 1.40); reporting barriers to accessing healthcare (APR: 1.23; 95% CI: 1.01 – 1.49); and study enrolment in 2011 (APR: 1.27; 95% CI: 1.07 – 1.49).

In sub-analysis, among respondents completing surveys in 2011 (n = 144), 68.1% reported experiencing police beating while being interrogated, 43.1% reported being beaten during their arrest, 22.9% were beaten while being searched, and 22.9% reported having been beaten while in police holding cells.

4.4 Discussion

We found that over one-third of a sample of IDU in Bangkok reported having ever been beaten by police. Reports of police beating were independently associated with male gender, younger age among those who never injected methamphetamine,
a history of incarceration, compulsory drug detention and syringe sharing, and reporting barriers to accessing healthcare. Respondents most commonly experienced police beating during the interrogation process.

To our knowledge, the present study is the first to quantitatively examine the prevalence and correlates of experiencing physical violence at the hands of police among IDU in Thailand. The findings that the overall prevalence of experiencing police beatings in the past was 37.6% in 2009–2011, and the majority of the victims (68.1%) experienced it during the interrogation process raise serious concern about police-perpetrated abuses against this population. Our findings are consistent with previous reports during the 2003 “war on drugs” campaign indicating that police beating was used as a tactic to extract confessions of drug-related crimes from suspected drug users.22

We also found that male IDU experienced police beating more often than women. Thai police are believed to profile IDU based on factors such as needle marks.22 As the great majority of Thai IDU population is believed to be comprised of males,206 male IDU may be more susceptible to police profiling of IDU and police-perpetrated physical violence. However, it is also important to note that women may have been susceptible to other forms of police violence, such as sexual violence, which were not examined in the present study. We also found that younger IDU who never injected methamphetamine were more likely to have been beaten by police. Given that young people are a major target of drug demand reduction efforts in Thailand,207 young IDU may be more vulnerable to police beating. However, reasons that the independent association was found only among those who never injected methamphetamine were unknown.

Of particular concern is the finding that reports of police beating were independently associated with a history of incarceration and compulsory drug
detention. This finding, considered alongside our data concerning the circumstances of police beatings, suggests that IDU in this setting may experience police beating before being sent to prison or compulsory drug detention. This is concerning because these institutions may be ill equipped to deal with physical and psychological manifestations of traumatic injuries. Alternatively, the finding may suggest that individuals with a history of incarceration or compulsory drug detention are easier targets for police. Indeed, previous reports documented widespread use of “blacklists” by the Thai police during the 2003 “war on drugs” campaign, on which individuals with records of drug-related arrests were listed as suspected drug users or traffickers. More recent reports also suggested the continued use of blacklists by police, indicating that the latter interpretation may be also plausible.

Episodes of police beating were also independently associated with syringe sharing and reporting barriers to accessing health services. Consistent with previous studies from other settings indicating the negative impact of aggressive drug policing on seeking health and harm reduction services by IDU, our findings suggest that acts of violence by police may create environment that promotes fear and constrains Thai IDUs’ access to healthcare and ability to practice harm reduction activities. While a temporal ordering of police beating and syringe sharing was not assessed in the present study, a previous study demonstrated an independent association between difficulty in accessing sterile syringes and syringe borrowing among IDU in this setting. Therefore, it may be that individuals who experienced police beating retreated into more hidden settings where it was difficult to obtain sterile syringes, making the adoption of harm reduction practices difficult or impossible.
Our findings have implications for policies and programs related to drug policing in Thailand. First, the extent of police beating reported in the present study raises concern about widespread violations of basic human rights of IDU in this setting, including the rights to security of the person (Article 9) and to freedom from torture and cruel, inhuman, and degrading treatment (Article 7) under the International Covenant on Civil and Political Rights (ICCPR), to which Thailand became a party in 1996. Therefore, a greater oversight of police operations should be a priority for the Thai government. Second, given the findings that police beating may be undermining HIV prevention and health-seeking practices among IDU in this setting, more efforts should be made to make drug policing respectful of the right to health of IDU. Some examples of such efforts proposed and made in other settings include encouraging police officers to exercise discretion or cautioning or other measures instead of arresting street-level drug users, training police officers to support or at least not undermine harm reduction activities, and establishing multi-sectoral partnerships between police and health agencies. However, evaluations of these efforts showed some mixed results, pointing out various barriers to implementation, including staff turnover, organizational culture in the police, variations in public perception of the role of police, and ongoing police corruption. There is clearly a need for more work to address such barriers.

This study has several limitations. First, due to the cross-sectional study design, we were unable to assess temporal relationships between the outcome and explanatory variables. Second, the self-reported data may have been affected by socially desirable responding or recall bias. However, we note that this type of data has been commonly utilized in observational studies involving IDU and found to be valid. Third, as the study sample was not randomly selected, our findings may not be generalizable to other populations of IDU in Thailand.
In sum, we found that a high proportion of a community-recruited sample of IDU in Bangkok reported having been beaten by police. Experiencing police beating was independently associated with indicators of drug-related harm, including syringe sharing and barriers to accessing healthcare. These findings suggest that the over-reliance on repressive drug policing may be contributing to human rights violations at the hands of police and exacerbating HIV risk among IDU in this setting. Therefore, they indicate the need for greater police oversight and a shift toward the implementation of policies and programs that are shown to effectively address HIV/AIDS and respect the right to health of IDU.
Table 2: Bivariate analyses of factors associated with reports of police beatings among 639 IDU in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Ever beaten by police</th>
<th>Prevalence Ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes 240 (37.6%)</td>
<td>No 399 (62.4%)</td>
<td></td>
</tr>
<tr>
<td>Calendar year of study enrolment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>144 (43.4%)</td>
<td>188 (56.6%)</td>
<td>1.39 (1.13 – 1.71)</td>
</tr>
<tr>
<td>2009</td>
<td>96 (31.3%)</td>
<td>211 (68.7%)</td>
<td></td>
</tr>
<tr>
<td>Sociodemographic characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 37 years old</td>
<td>119 (38.3%)</td>
<td>192 (61.7%)</td>
<td>1.04 (0.85 – 1.27)</td>
</tr>
<tr>
<td>≥ 37 years old</td>
<td>121 (36.9%)</td>
<td>207 (63.1%)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>227 (46.7%)</td>
<td>259 (53.3%)</td>
<td>5.50 (3.24 – 9.33)</td>
</tr>
<tr>
<td>Female</td>
<td>13 (8.5%)</td>
<td>140 (91.5%)</td>
<td></td>
</tr>
<tr>
<td>Income from drug dealing*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>21 (43.8%)</td>
<td>27 (56.3%)</td>
<td>1.18 (0.84 – 1.65)</td>
</tr>
<tr>
<td>No</td>
<td>219 (37.1%)</td>
<td>372 (62.9%)</td>
<td></td>
</tr>
<tr>
<td>Drug use behaviour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heroin injection ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>228 (40.3%)</td>
<td>338 (59.7%)</td>
<td>2.45 (1.45 – 4.15)</td>
</tr>
<tr>
<td>No</td>
<td>12 (16.4%)</td>
<td>61 (83.6%)</td>
<td></td>
</tr>
<tr>
<td>Midazolam injection ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>210 (40.0%)</td>
<td>315 (60.0%)</td>
<td>1.52 (1.10 – 2.10)</td>
</tr>
<tr>
<td>No</td>
<td>30 (26.3%)</td>
<td>84 (73.7%)</td>
<td></td>
</tr>
<tr>
<td>Methamphetamine injection ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>180 (39.6%)</td>
<td>274 (60.4%)</td>
<td>1.22 (0.96 – 1.55)</td>
</tr>
<tr>
<td>No</td>
<td>60 (32.4%)</td>
<td>125 (67.6%)</td>
<td></td>
</tr>
<tr>
<td>Crystal methamphetamine injection ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>48 (51.6%)</td>
<td>45 (48.4%)</td>
<td>1.47 (1.17 – 1.84)</td>
</tr>
<tr>
<td>No</td>
<td>192 (35.2%)</td>
<td>354 (64.8%)</td>
<td></td>
</tr>
<tr>
<td>Syringe sharing ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>175 (47.0%)</td>
<td>197 (53.0%)</td>
<td>1.93 (1.52 – 2.45)</td>
</tr>
<tr>
<td>No</td>
<td>65 (24.3%)</td>
<td>202 (75.7%)</td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; CI: Confidence Interval.
* denotes events/activities in the previous 6 months.
Table 2: Bivariate analyses of factors associated with reports of police beatings among 639 IDU in Bangkok, Thailand (continued)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Ever beaten by police</th>
<th>Prevalence Ratio (95% CI)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes 240 (37.6%)</td>
<td>No 399 (62.4%)</td>
<td></td>
</tr>
<tr>
<td><strong>Experiences with criminal justice system</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever in prison</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>220 (43.8%)</td>
<td>282 (56.2%)</td>
<td>3.00 (1.98 – 4.56) &lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>20 (14.6%)</td>
<td>117 (85.4%)</td>
<td></td>
</tr>
<tr>
<td>Ever in compulsory drug detention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>56 (47.1%)</td>
<td>63 (52.9%)</td>
<td>1.33 (1.06 – 1.66) 0.012</td>
</tr>
<tr>
<td>No</td>
<td>184 (35.4%)</td>
<td>336 (64.6%)</td>
<td></td>
</tr>
<tr>
<td><strong>Healthcare access</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever accessed methadone treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>200 (42.2%)</td>
<td>274 (57.8%)</td>
<td>1.74 (1.30 – 2.33) &lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>40 (24.2%)</td>
<td>125 (75.8%)</td>
<td></td>
</tr>
<tr>
<td>Reporting barriers to accessing healthcare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any</td>
<td>158 (44.6%)</td>
<td>196 (55.4%)</td>
<td>1.55 (1.25 – 1.93) &lt;0.001</td>
</tr>
<tr>
<td>None</td>
<td>82 (28.8%)</td>
<td>203 (71.2%)</td>
<td></td>
</tr>
<tr>
<td><strong>Health outcomes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV serostatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>61 (47.3%)</td>
<td>68 (52.7%)</td>
<td>1.35 (1.08 – 1.67) 0.007</td>
</tr>
<tr>
<td>Negative or unknown</td>
<td>179 (35.1%)</td>
<td>331 (64.9%)</td>
<td></td>
</tr>
<tr>
<td>Non-fatal overdose ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81 (52.6%)</td>
<td>73 (47.4%)</td>
<td>1.60 (1.32 – 1.95) &lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>159 (32.8%)</td>
<td>326 (67.2%)</td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; CI: Confidence Interval.
* denotes events/activities in the previous 6 months.
### Table 3: Multivariate log-binomial regression analysis of factors associated with reports of police beatings among 639 IDU in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Variable</th>
<th>Adjusted PR</th>
<th>95% CI</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calendar year of study enrolment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2011 vs. 2009)</td>
<td>1.27</td>
<td>(1.07 – 1.49)</td>
<td>0.005</td>
</tr>
<tr>
<td><strong>Younger age among those who ever injected methamphetamine</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&lt; 37 years vs. ≥ 37 years old)</td>
<td>1.18</td>
<td>(0.99 – 1.41)</td>
<td>0.062</td>
</tr>
<tr>
<td><strong>Younger age among those who never injected methamphetamine</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&lt; 37 years vs. ≥ 37 years old)</td>
<td>1.69</td>
<td>(1.17 – 2.43)</td>
<td>0.005</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Male vs. Female)</td>
<td>4.43</td>
<td>(2.63 – 7.49)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Syringe sharing ever</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>1.44</td>
<td>(1.15 – 1.80)</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>Ever in prison</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>2.51</td>
<td>(1.68 – 3.77)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Ever in compulsory drug detention</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>1.22</td>
<td>(1.05 – 1.40)</td>
<td>0.008</td>
</tr>
<tr>
<td><strong>Reporting barriers to accessing healthcare</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Any vs. None)</td>
<td>1.23</td>
<td>(1.01 – 1.49)</td>
<td>0.043</td>
</tr>
<tr>
<td><strong>Non-fatal overdose ever</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>1.14</td>
<td>(0.97 – 1.34)</td>
<td>0.115</td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; PR: prevalence ratio; CI: Confidence Interval.
*denotes events/activities in the previous six months.
CHAPTER 5: EXPERIENCES WITH URINE DRUG TESTING BY POLICE AMONG PEOPLE WHO INJECT DRUGS IN BANGKOK, THAILAND

5.1 Introduction

In the past decade, Rhodes’ Risk Environment Framework has been applied extensively to examine the effect of intensive police crackdowns on the health of IDU. As described in Chapter 2, previous research shows that aggressive policing practices, such as physical violence, can directly harm IDU. They can also intersect with other elements of the risk environment and increase IDUs’ vulnerability to poor health outcomes. For example, increased police presence may displace IDU into remote or hidden locations and disrupt healthcare service provision to this population. Despite a large body of scientific literature documenting the adverse impacts of police crackdowns on the health of IDU, previous studies tended to focus on the aggregate effects and consequences of police crackdowns rather than on specific policing tactics.

Under Thailand’s Narcotics Control Act (Section 14) and Narcotics Act (Section 58/1), drug law enforcement officers have the authority to perform drug testing on anyone based upon reasonable suspicion. Although anecdotal reports suggest that the Thai police frequently use exercise this power and use rapid urine toxicology screening on the streets of Bangkok, we know of no studies that investigated the impact and ethics of this practice. Therefore, we sought to identify the prevalence and correlates of experiencing urine drug testing by police among a community-recruited sample of IDU in Bangkok, Thailand.

5.2 Methods

Quantitative data for this study were derived from the Mitsampan Community Research Project, as described in detail in section 1.6.
All respondents who completed the interview between July and October 2011 were eligible for inclusion in this study. The sample was restricted to individuals who provided complete data for the present analyses. The primary outcome of interest in this study was experiencing urine toxicology testing by police, defined as answering “Yes” to the following question: “Have you ever been tested for drugs by police?” In the present study setting, “having been tested for drugs by police” referred to having been subjected to urine toxicology testing by police.

Guided by the Risk Environment Framework,79,80 a broad set of explanatory variables were hypothesized to be potentially associated with the outcome. These variables included: age (below or above median age; < 38 years vs. ≥ 38 years); gender (male vs. female); heroin injection; midazolam injection (a short-acting benzodiazepine); methamphetamine injection (i.e., methamphetamine pills [locally called yaba] or crystal methamphetamine powder [locally called ice]); syringe sharing; ever incarcerated; ever in compulsory drug detention; ever accessed voluntary drug treatment; ever disclosed illicit drug use to a doctor; reporting avoidance of healthcare; reporting feeling ashamed about being a drug user; HIV serostatus (positive vs. negative or unknown); and non-fatal overdose ever. As in a previous study,55 non-fatal overdose was defined as a period of loss of consciousness or breathing. All variables were coded dichotomously as yes vs. no, unless otherwise stated. All variables related to drug-using behaviour referred to any time in the past.

For bivariate and multivariate analyses, we used the prevalence ratio, rather than the odds ratio, as a measure of association because the frequency of the outcome exceeded 10%.203 First, we used Poisson regression with the robust variance to examine bivariate associations between reports of drug testing by police and the explanatory variables, which gave us unadjusted prevalence ratios with corresponding 95% confidence intervals.204 Next, we used an a priori-defined
statistical protocol that examined factors associated with the outcome by fitting a multivariate robust Poisson regression model that included all variables that were significantly associated with the outcome at the $p < 0.05$ level in bivariate analyses. All $p$-values were two-sided. All statistical analyses were performed with SAS version 9.3 (SAS Institute Inc., Cary, NC, USA).

5.3 Results

In total, 438 IDU participated in this study, including 87 (19.9%) women. The median age was 38 years (interquartile range: 34 – 48 years). In total, 293 (66.9%) individuals reported having ever been tested for illicit drugs by police.

Table 4 shows the results of bivariate analyses. As shown, reports of drug testing by police were significantly and positively associated with younger age (prevalence ratio [PR]: 1.32; 95% confidence interval [CI]: 1.16 – 1.51); methamphetamine injection ever (PR: 1.33; 95% CI: 1.11 – 1.60); ever incarcerated (PR: 1.25; 95% CI: 1.05 – 1.50); ever in compulsory drug detention (PR: 1.58; 95% CI: 1.43 – 1.74); ever disclosed illicit drug use to a doctor (PR: 1.16; 95% CI: 1.01 – 1.34); avoidance of healthcare (PR: 1.19; 95% CI: 1.04 – 1.36); and HIV seropositivity (PR: 1.18; 95% CI: 1.02 – 1.36). Ever accessed voluntary drug treatment was significantly and negatively associated with the outcome (PR: 0.81; 95% CI: 0.71 – 0.92).

Table 5 shows the results from the final multivariate Poisson regression model. As shown, reports of drug testing by police were independently and positively associated with younger age (adjusted prevalence ratio [APR]: 1.28; 95% CI: 1.12 – 1.45); methamphetamine injection ever (APR: 1.22; 95% CI: 1.03 – 1.44); ever incarcerated (APR: 1.21; 95% CI: 1.02 – 1.44); ever in compulsory drug detention (APR: 1.43; 95% CI: 1.29 – 1.58); avoidance of healthcare (APR: 1.15; 95% CI: 1.01 – 1.30); and HIV seropositivity (APR: 1.19; 95% CI: 1.02 – 1.38). Ever accessed
voluntary drug treatment (APR: 0.82; 95% CI: 0.71 – 0.94) was independently and negatively associated with the outcome.

5.4 Discussion

We found that two thirds of a sample of IDU in Bangkok reported having been tested for illicit drugs by police. In multivariate analyses, reports of drug testing by police were independently and positively associated with younger age, methamphetamine injection, HIV seropositivity, incarceration, compulsory drug detention, and avoidance of healthcare. In contrast, individuals who had experienced drug testing by police were less likely to have accessed voluntary drug treatment.

To our knowledge, the present study is the first to describe the prevalence and correlates of experiencing drug testing by police among IDU. We found that that this policing tactic has been widely used with IDU in Bangkok. The findings that experiencing drug testing by police was independently associated with younger age and methamphetamine injection may reflect the fact that Thai authorities have attached great importance to a widespread epidemic of methamphetamine use among young people in the country.\textsuperscript{39,212} Thus, young people may be easy visible targets for police. Methamphetamine injectors may have exhibited some overt intoxication or withdrawal symptoms of methamphetamine use\textsuperscript{213} when police approached them.

Having been in compulsory drug detention centres was independently associated with experiencing drug testing by police. As documented in a previous report,\textsuperscript{157} police may have obtained information on people who underwent compulsory drug detention centres through registries and approached these people. Another plausible interpretation is that those who had been subjected to drug testing by police were subsequently sent to compulsory drug detention centres
because these centres primarily serve those charged with illicit drug consumption.\textsuperscript{27} The finding that reports of drug testing by police were also independently associated with incarceration supports this interpretation, given that those charged with illicit drug consumption are typically detained in prisons while being assessed for eligibility for compulsory drug treatment.\textsuperscript{27} As well, given the increases in the number of drug users that the Thai government has targeted for rehabilitation over the past several years,\textsuperscript{41-44} Thai police may have been pressured to make arrests and extensively employed drug testing to help identify people to arrest. Regardless, our findings indicate that forcible drug testing by police may be linked to the compulsory drug detention and prison systems.

We also found that individuals who experienced drug testing by police were more likely to be HIV-positive and to have been in prison. As prisons are known to contribute significantly to HIV transmission among Thai IDU,\textsuperscript{53,56} it is concerning that the extensive use of drug testing by police may result in the incarceration of a large number of IDU and thereby serve to fuel transmission of HIV among IDU inmates. In light of this finding, it is important to note that WHO and other UN agencies recommend providing comprehensive HIV prevention services (e.g., sterile syringe distribution) in prisons and ensuring the continuity of HIV treatment and care as HIV-positive persons transition between prison and the community.\textsuperscript{211} However, Thai prisons do not provide sterile syringes. Although antiretroviral therapy (ART) is available free of charge to all prisoners in Bangkok, a previous report suggested that inmates who received ART in prison faced various barriers to continuing it upon release.\textsuperscript{157} Therefore, our findings underscore a need to improve HIV prevention and treatment efforts in Thai prisons.

Of particular concern are the findings in relation to healthcare access. Experiences with drug testing by police were independently associated with
avoidance of healthcare, suggesting that those who experienced drug testing by police might be deterred from accessing healthcare. This is consistent with a vast international literature showing that repressive drug policing often interferes with health service delivery to IDU. Likewise, the finding that reports of drug testing by police were negatively associated with the enrolment in voluntary drug treatment may suggest that those who were forced to undergo drug testing by police may have retreated into more hidden settings and therefore were less likely to access voluntary drug treatment programs afterwards. Alternatively, it is also possible that individuals who accessed voluntary drug treatment may have had less visible signs of illicit drug use and were therefore less likely to be an immediate target for police. Although more research is needed to explore these associations, our findings suggest that the widespread use of drug testing by police may be negatively affecting IDUs’ health-seeking behaviour in this setting.

Facilitating access to scientifically sound addiction treatment among people who use drugs is a key means of responding to epidemics of illicit drug use and HIV infection. As is evident in previous reports, the compulsory drug detention system is the principal strategy employed by the Thai government as part of the demand reduction measures, and drug testing by police may be playing a critical role in this system. However, previous reports indicated that prior to compulsory drug treatment, people were routinely detained in prison with little or no medical assistance for drug withdrawal symptoms, and compulsory drug detention centres did not appear to reduce drug use among IDU upon release. Furthermore, twelve UN agencies have recently stated that these centres threaten the health and human rights of detainees and called upon the government to close down the centres, which was also echoed by the UN Special Rapporteur on torture.
testing by police in the present study, the Thai government should carefully reconsider the purpose, as well as potential benefits and harms of this practice.

This study has several limitations. First, we cannot infer causation from this observational study. While it is plausible that urine toxicology testing resulted in individuals ending up in compulsory drug detention, due to the cross-sectional study design, we were unable to assess temporal relationships between the outcome and explanatory variables. Second, the self-reported data may have been affected by socially desirable responding or recall bias. However, we note that this type of data has been commonly utilized in observational studies involving IDU and found to be valid.209,210 Third, as the study sample was not randomly selected, our findings may not be generalizable to other populations of IDU in Thailand or elsewhere.

In sum, we found that a high proportion of a community-recruited sample of IDU in Bangkok reported having been tested for illicit drugs by police. Young people and methamphetamine injectors appeared to be the primary targets of this policing tactic. Our findings also indicated that urine toxicology testing by police is linked to the compulsory drug detention system and other indicators of drug-related harm, including reduced access to healthcare. These findings raise serious concern about the use of drug testing by police in its current form.
Table 4: Bivariate analyses of factors associated with experiencing drug testing by police among 438 IDU in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Ever tested for illicit drugs by police</th>
<th>Prevalence Ratio (95%CI)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>293 (66.9%)</td>
<td>145 (33.1%)</td>
<td></td>
</tr>
<tr>
<td>Demographic characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 38 years old</td>
<td>159 (54.3%)</td>
<td>48 (33.1%)</td>
<td>1.32 (1.16 – 1.51)</td>
</tr>
<tr>
<td>≥ 38 years old</td>
<td>134 (45.7%)</td>
<td>97 (66.9%)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>234 (79.9%)</td>
<td>117 (80.7%)</td>
<td>0.98 (0.84 – 1.16)</td>
</tr>
<tr>
<td>Female</td>
<td>59 (20.1%)</td>
<td>28 (19.3%)</td>
<td></td>
</tr>
<tr>
<td>Drug use behaviour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heroin injection ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>262 (89.4%)</td>
<td>136 (93.8%)</td>
<td>0.85 (0.71 – 1.02)</td>
</tr>
<tr>
<td>No</td>
<td>31 (10.6%)</td>
<td>9 (6.2%)</td>
<td></td>
</tr>
<tr>
<td>Midazolam injection ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>245 (83.6%)</td>
<td>114 (78.6%)</td>
<td>1.12 (0.93 – 1.36)</td>
</tr>
<tr>
<td>No</td>
<td>48 (16.4%)</td>
<td>31 (21.4%)</td>
<td></td>
</tr>
<tr>
<td>Methamphetamine injection ever*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>230 (78.5%)</td>
<td>91 (62.8%)</td>
<td>1.33 (1.11 – 1.60)</td>
</tr>
<tr>
<td>No</td>
<td>63 (21.5%)</td>
<td>54 (37.2%)</td>
<td></td>
</tr>
<tr>
<td>Syringe sharing ever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>190 (64.9%)</td>
<td>86 (59.3%)</td>
<td>1.08 (0.94 – 1.25)</td>
</tr>
<tr>
<td>No</td>
<td>103 (35.1%)</td>
<td>59 (40.7%)</td>
<td></td>
</tr>
<tr>
<td>Experiences with criminal justice system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever in prison</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>230 (78.5%)</td>
<td>96 (66.2%)</td>
<td>1.25 (1.05 – 1.50)</td>
</tr>
<tr>
<td>No</td>
<td>63 (21.5%)</td>
<td>49 (33.8%)</td>
<td></td>
</tr>
<tr>
<td>Ever in compulsory drug detention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>79 (27.0%)</td>
<td>4 (2.8%)</td>
<td>1.58 (1.43 – 1.74)</td>
</tr>
<tr>
<td>No</td>
<td>214 (73.0%)</td>
<td>141 (97.2%)</td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; CI: Confidence Interval.

*Methamphetamine includes methamphetamine pills and crystal methamphetamine powder.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Yes tested for illicit drugs by police</th>
<th>Prevalence Ratio (95%CI)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>293 (66.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>145 (33.1%)</td>
<td></td>
</tr>
</tbody>
</table>

*Healthcare access*

**Ever accessed voluntary drug treatment**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>215 (73.4%)</th>
<th>124 (85.5%)</th>
<th>0.81 (0.71 – 0.92)</th>
<th>0.001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>78 (26.6%)</td>
<td>21 (14.5%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ever disclosed drug use to a doctor**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>183 (62.5%)</th>
<th>75 (51.7%)</th>
<th>1.16 (1.01 – 1.34)</th>
<th>0.037</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>110 (37.5%)</td>
<td>70 (48.3%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Avoid accessing healthcare**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>85 (29.0%)</th>
<th>27 (18.6%)</th>
<th>1.19 (1.04 – 1.36)</th>
<th>0.010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>208 (71.0%)</td>
<td>118 (81.4%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Internalized stigma*

**Feeling ashamed of being a drug user**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>215 (73.4%)</th>
<th>104 (71.7%)</th>
<th>1.03 (0.88 – 1.20)</th>
<th>0.718</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>78 (26.6%)</td>
<td>41 (28.3%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Health outcomes*

**HIV serostatus**

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>61 (20.8%)</th>
<th>19 (13.1%)</th>
<th>1.18 (1.02 – 1.36)</th>
<th>0.027</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative or unknown</td>
<td>232 (79.2%)</td>
<td>126 (86.9%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Non-fatal overdose ever**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>83 (28.3%)</th>
<th>36 (24.8%)</th>
<th>1.06 (0.92 – 1.22)</th>
<th>0.426</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>210 (71.7%)</td>
<td>109 (75.2%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; CI: Confidence Interval.

*Methamphetamine includes methamphetamine pills and crystal methamphetamine powder.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Adjusted PR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Younger age (&lt; 38 years vs. ≥ 38 years old)</td>
<td>1.28</td>
<td>(1.12 – 1.45)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Methamphetamine injection ever* (Yes vs. No)</td>
<td>1.22</td>
<td>(1.03 – 1.44)</td>
<td>0.023</td>
</tr>
<tr>
<td>Ever in prison (Yes vs. No)</td>
<td>1.21</td>
<td>(1.02 – 1.44)</td>
<td>0.030</td>
</tr>
<tr>
<td>Ever in compulsory drug detention (Yes vs. No)</td>
<td>1.43</td>
<td>(1.29 – 1.58)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Ever accessed voluntary drug treatment (Yes vs. No)</td>
<td>0.82</td>
<td>(0.71 – 0.94)</td>
<td>0.004</td>
</tr>
<tr>
<td>Ever disclosed drug use to a doctor (Yes vs. No)</td>
<td>1.11</td>
<td>(0.97 – 1.27)</td>
<td>0.145</td>
</tr>
<tr>
<td>Avoid accessing healthcare (Yes vs. No)</td>
<td>1.15</td>
<td>(1.01 – 1.30)</td>
<td>0.038</td>
</tr>
<tr>
<td>HIV serostatus (Positive vs. Negative or unknown)</td>
<td>1.19</td>
<td>(1.02 – 1.38)</td>
<td>0.024</td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; PR: prevalence ratio; CI: Confidence Interval.
*Methamphetamine includes methamphetamine pills and crystal methamphetamine powder.
CHAPTER 6: THE RELATIONSHIP BETWEEN EXPOSURES TO POLICING AND SYRINGE SHARING AMONG PEOPLE WHO INJECT DRUGS IN BANGKOK, THAILAND

6.1 Introduction

In many parts of the world, injection drug use remains a primary driver of HIV infection. On June 10, 2011, the UN General Assembly High Level Meeting on AIDS adopted the Political Declaration on HIV/AIDS and made a bold pledge to halve HIV transmission among IDU by 2015. To this end, the declaration explicitly referred to the implementation and expansion of harm reduction programs, which had been recommended by the UN agencies as key HIV prevention efforts for IDU. These programs consist of nine evidence-based interventions, including NSPs. Although the number of countries endorsing this approach has increased in recent years, the availability and coverage of the programs vary across jurisdictions and tend to be low.

As described in Chapter 2, a large body of literature has suggested that repressive policing practices represented one of the recognized determinants of HIV risk and infection among IDU in many regions of the world. However, previous studies tended to focus on the aggregate effects and consequences of police crackdowns rather than on direct encounters with police or specific policing tactics. While a smaller number of studies have described the effects of experiencing specific forms of policing on HIV risk behaviour among IDU, such as arrest for syringe possession and syringe confiscation by police, other commonly used policing tactics have not been explored.

Thailand has experienced a longstanding epidemic of HIV among IDU, with an estimated 30% to 50% of IDU living with HIV/AIDS over the past two decades. In June 2012, the Thai government announced a new national HIV/AIDS strategic...
plan 2012-2016 and aimed to reduce new HIV infection by two-thirds by 2016.²²² However, the coverage of HIV prevention programs for IDU remains low.²²⁰ On the other hand, in 2011, the Thai government targeted 400,000 people who use drugs to undergo drug rehabilitation programs and intensified police crackdowns on this population.⁴⁴,⁴⁵ It is well known that the 2003 “war on drugs” resulted in widespread police misconduct and human rights abuses.²² Although more recent reports suggested that harmful policing practices have continued into the post-2003 period,¹⁵⁷ the extent to which ongoing policing practices affect HIV risk behaviour among IDU has not been well investigated in this setting. In addition, although Thai dug laws allow drug law enforcement officers to drug test anyone on reasonable suspicion²⁶ and anecdotal reports suggest that the Thai police frequently use rapid urine toxicology testing to identify drug offenders in Bangkok, the effect of this policing practice on HIV risk behaviour has not been investigated.

In the wake of the renewed crackdowns, and given the knowledge gaps regarding the effect of direct encounters with police on HIV risk of IDU, we sought to examine the relationship between syringe sharing and exposures to specific policing tactics among IDU in Bangkok, Thailand.

6.2 Methods

Quantitative data for this study were derived from the Mitsampan Community Research Project, as described in detail in section 1.6.

For this study, we included respondents who completed the interview between July and October 2011. The sample was restricted to individuals who provided complete data for the purpose of the present analyses. The primary outcome of interest in this study was syringe sharing in the past six months, defined as having borrowed or lent used syringes from/to others in the past six months (i.e., a combined endpoint of receptive and distributive sharing).
The primary explanatory variable of interest was the effect of exposures to specific policing tactics. Previous quantitative studies have shown that increased contacts with police (measured as drug-related arrest rates, for instance) were positively correlated with syringe sharing and HIV prevalence among IDU. On the other hand, a qualitative study suggested that IDU might be engaged in syringe sharing out of fear of police that was caused not necessarily by recent encounters with police but by past experiences of extrajudicial policing actions (e.g., police beating of IDU). Informed by these previous studies and the conceptual framework (Figure 1), we hypothesized that both experiences of severe police violence (regardless of timing) and a recent direct encounter with police would increase fear of police and in turn, increase risk of syringe sharing. The two types of exposures to policing were operationalized as having ever been beaten by police and having been tested for illicit drugs by police in the past six months. We hypothesized that experiencing both beating and drug testing by police would yield the greatest effect on syringe sharing. Therefore, we created a variable for exposures to specific policing tactics with four categories: (1) having experienced drug testing by police in the past six months but no police beatings any time in the past; (2) having experienced police beatings any time in the past but no drug testing in the past six months; (3) having experienced the two events (i.e., having been beaten by police any time in the past and having been tested for illicit drugs by police in the past six months); and (4) having experienced neither of the events (our reference category).

Previous studies of IDU in Bangkok found that syringe sharing was associated with difficulty accessing sterile syringes, injecting with other people on a frequent basis, and frequent methamphetamine injection. Building on these findings, we considered secondary explanatory variables that might confound the relationship between exposures to specific policing tactics and syringe sharing.
These included younger age (dichotomized at the median age: < 38 years vs. ≥ 38 years); gender (male vs. female); HIV serostatus (positive vs. negative or unknown); injecting heroin, midazolam (a short-acting benzodiazepine), methamphetamine (locally called *yaba*), or crystal methamphetamine (locally called *ice*) (> once per week vs. ≤ once per week); use of drugs in combination (yes vs. no); binge drug use (yes vs. no); injecting with others on a frequent basis (> 75% of time vs. ≤ 75% of time); accessing voluntary drug treatment (yes vs. no); having difficulty accessing sterile syringes (yes or sometimes vs. no); and having ever accessed one of the four drop-in centers for drug users in Bangkok (yes vs. no). All variables were derived from self-reported data and referred to the period beginning six months prior to the interview, unless otherwise stated.

For the bivariate and multivariate analyses, we used the prevalence ratio, rather than the odds ratio, as a measure of association because the frequency of the outcome exceeded 10%. First, we used simple binomial regression with a log link function to examine bivariate associations between syringe sharing in the past six months and the explanatory variables, which gave us unadjusted prevalence ratios with corresponding 95% confidence intervals. We also examined Pearson’s correlation coefficient to estimate the strength of correlation between each explanatory variable and the outcome.

To obtain effect estimates for exposures to specific policing tactics accounting for potential confounders, we used an *a priori*-defined statistical protocol proposed by Maldonado and Greenland to construct a multivariate log-binomial regression model. We used a conservative *p*-value of 0.20 in the bivariate analyses to determine whether a secondary explanatory variable was considered a potential confounder in the relationship between exposures to specific policing tactics and syringe sharing and for inclusion in a full multivariate model. Maldonado and Greenland
recommends using the conservative $p$-value to account for potential important confounders that may not be associated with the outcome at the $p < 0.05$ level in bivariate analyses. The full model was then subjected to a manual backward selection approach to select significant confounders. Specifically, beginning with a full model with all covariates that were associated with syringe sharing at $p < 0.20$ in the bivariate analyses, secondary explanatory variables were dropped one at a time using the relative change in the regression coefficient for the variable related to exposures to specific policing tactics as criteria, until the smallest relative change in the coefficient for any category of exposures to specific policing tactics from the full model exceeded 10%. We then fit a final model including exposures to specific policing tactics and all remaining covariates as terms in the regression equation. Because the full multivariate log-binomial regression model did not converge, we used the COPY method in the SAS (SAS Institute Inc., Cary, NC, USA) to obtain approximate maximum likelihood estimates. All $p$-values were two-sided. All statistical analyses were performed with SAS version 9.3.

6.3 Results

In total, 435 respondents were included in the present study, including 84 (19.3%) women. The median age was 38 years (interquartile range: 34 – 48 years). A total of 75 (17.2%) reported having shared syringes in the past six months. Fifty-seven (13.1%) individuals reported having experienced both police beatings and drug testing by police in the past six months. Sixty (13.8%) reported experiencing drug testing by police in the past six months, but had never experienced a beating by police. One hundred twenty-three (28.3%) reported having been beaten by police but not having been tested for illicit drugs by police in the past six months. The remaining 195 (44.8%) respondents reported having experienced neither of the two events.
Table 6 presents the unadjusted prevalence ratios of syringe sharing for each primary and secondary explanatory variable, as well as Pearson’s correlation coefficient of each association. As shown, all correlation coefficients fell under 0.17. All three categories of exposures to specific policing tactics were significantly associated with syringe sharing in the past six months. In particular, compared to the reference category (i.e., reporting neither of police beatings nor recent drug testing by police), reporting both police beatings and recent drug testing by police had the strongest association with syringe sharing (prevalence ratio [PR]: 2.61; 95% confidence interval [CI]: 1.46 – 4.65), followed by reports of recent drug testing by police only (PR: 2.17; 95% CI: 1.18 – 3.99) and reports of police beatings only (PR: 1.81; 95% CI: 1.06 – 3.11).

As shown in Table 7 and Figure 2, this relationship persisted in the final multivariate model, accounting for possible confounders including gender, frequent injection with others, enrolment in voluntary drug treatment, and having difficulty in accessing sterile syringes. In multivariate analyses, individuals who experienced both police beatings and recent drug testing by police were 2.4 times more likely to have shared syringes in the past six months than those who experienced neither of the two events (adjusted prevalence ratio [APR]: 2.40; 95% CI: 1.35 – 4.26). Similarly, those who reported recent drug testing by police only were twice as likely to have shared syringes in the past six months (APR: 2.00; 95% CI: 1.16 – 3.45), and those who experienced police beatings only were 1.8 times more likely (APR: 1.82; 95% CI: 1.04 – 3.20) to have done so than those who experienced neither of the two events. Other variables that were significantly associated with the outcome in multivariate analyses included: injected with others on a frequent basis (APR: 1.59; 95% CI: 1.06 – 2.39), access to voluntary drug treatment (APR: 1.60; 95% CI: 1.11 – 2.30), and difficulty accessing sterile syringes (APR: 2.81; 95% CI: 1.88 – 4.19).
6.4 Discussion

We found that about nearly one-fifth of a sample of IDU in Bangkok engaged in syringe sharing during the six months prior to the study enrolment in 2011. Further, exposures to policing were common, with 41% reporting having ever been beaten by police, 27% reporting recent drug testing by police, and 13% reporting having been both beaten and recently tested for drugs by police. In multivariate analyses, exposures to these policing tactics were independently associated with syringe sharing in the past six months after adjustment for potential social, demographic, and behavioural confounders. Moreover, the strength of the association between exposures to specific policing tactics and syringe sharing increased according to the hypothesized level of exposures to specific policing tactics. In particular, in multivariate analyses, compared to those IDU who had never been beaten or recently tested for drugs by police, those who experienced both police beatings and drug testing were 2.4 times more likely to report syringe sharing, while those who reported only recent drug testing by police were twice more likely, and those who reported only police beatings were 1.8 times more likely to report syringe sharing.

The high prevalence of syringe sharing observed in this study is concerning given the high HIV prevalence among IDU in Thailand. While the potential difference in sample characteristics makes it difficult to compare the observed prevalence of syringe sharing (17%) with that from other sources, two previous studies using respondent-driven sampling methods in Bangkok reported that the prevalence of syringe sharing in the past six months was 17% among 947 IDU recruited in 2003-2004 and 14% among 742 IDU interviewed in 2009. Data from previous years of our own serial cross-sectional study of IDU in Bangkok showed that it was 30% among 238 IDU in 2008 (the rate refers to syringe borrowing only).
and 21% among 311 IDU in 2009 (the rate refers to syringe sharing).\textsuperscript{225} Although we are unable to assess the temporal trends in the rates of syringe sharing, it is clear that Thailand needs to improve its HIV prevention efforts among IDU to achieve the goal of reducing new HIV infections by two-thirds by 2016.\textsuperscript{222}

The independent relationship between exposures to specific policing tactics and syringe sharing found in the present study adds important evidence to the impact of drug policing on HIV risk among IDU and contributes to the development of the Risk Environment Framework. Previous studies showed that the magnitude of policing practices at the ecological level (measured as drug-related arrest rates, for instance) was positively correlated with HIV prevalence or the engagement in syringe sharing among IDU.\textsuperscript{223,224} Building on these previous research findings, the present study demonstrated that direct exposures to policing at the individual level was also independently associated with HIV risk behaviour. Further, while the majority of past literature indicated that perceived increases in police presence or “fear of arrest” among IDU increases the likelihood of the uptake of risky injecting behaviours among them,\textsuperscript{82,126} the present study identified past and recent direct exposures to specific policing tactics that are likely fuelling fear among IDU in Bangkok.

Our findings are also congruent with previous studies from Ukraine reporting a significant association between police beatings and syringe sharing among IDU in Odessa.\textsuperscript{81,122} The researchers projected that the elimination of police beatings in this setting could avert considerable portions of HIV infections among IDU.\textsuperscript{122} Since 2003, Thailand has received substantial support from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) to develop harm reduction programs for IDU, including NSPs.\textsuperscript{220,228} Given that difficulty in accessing sterile syringes has been previously shown to be an independent predictor of syringe
sharing among IDU in this setting, a scale-up of NSPs through the GFATM grants should have positive effects in reducing HIV risk in this population. However, the present study found that exposures to policing were also a significant risk factor of syringe sharing, independent of difficulty in accessing sterile syringes. Taken together with the finding from Ukraine, our findings suggest that syringe sharing in Bangkok may not be averted by NSPs in the absence of efforts to address harmful policing practices.

Another notable finding of this study is that the two distinct types of police exposures were independently associated with syringe sharing. The findings shed light on the adverse impacts of existing Thai drug policy and laws. Drug testing by police is a lawful policing practice that is allowed by drug statutes in this setting. Police beatings of IDU are unlawful practices but may be regarded as an indirect product of punitive drug policy and laws. The Thai constitution (Section 32) certainly do not permit police to use excessive force, but the disconnect between “laws on the books” and “laws on the streets” appears to facilitate it. Policies and laws that strictly penalize illicit drug use may have interacted with existing police norms, attitudes, and behaviours toward IDU and resulted in police-perpetrated physical violence against this population. Considering that both of these lawful and unlawful policing practices are shaped by the broader prohibitionist drug policy, and considering the present study findings that both practices likely contribute to perpetuation of the HIV epidemic among IDU in Bangkok, interventions aimed at sensitizing police officers to harm reduction may not be sufficient to address the root cause of the problem and meet the goal of reducing new HIV infections by two-thirds by 2016. While a range of efforts are needed to address harmful police actions, including providing more accountable oversight of police and restricting the police’s use of drug testing, broader structural changes,
such as alternative regulatory frameworks for illicit drugs, should also be explored in this setting. An increasing number of countries have recently adopted various models of decriminalization for the use and possession of illicit drugs for personal use, and evidence from Portugal, for example, suggests some positive results, including reductions in problematic drug use and drug-related harm, and increases in enrolment into voluntary addiction treatment.

Finally, we found that recent experiences with drug testing by police had a slightly stronger association with syringe sharing than experiences of police beating in the past. This may suggest that individuals who have recently experienced drug testing by police were subsequently detained in pre-trial detention facilities and engaged in syringe sharing while in such facilities. Indeed, a previous study has documented a high prevalence of syringe sharing in pre-trial detention facilities in this setting. Unfortunately, the present study was unable to adjust for the potential effect of pre-trial detention due to the high correlation with experiences with police. Nonetheless, heightened HIV risk within the pre-trial detention facilities is also arguably a negative consequence of repressive drug policing.

This study has several limitations. First, we cannot infer causation from this observational study. Due to the cross-sectional study design, we were unable to assess temporal relationships between the outcome and the primary explanatory variables. Second, the self-reported data may have been affected by socially desirable responding or recall bias. However, we note that this type of data has been commonly employed in observational studies involving IDU and found to be valid. Although it could be argued that some selection biases may be operating, whereby individuals who use drugs frequently, and hence are more likely to share syringes, are also more likely to have encounters with police, we note that the observed associations between exposures to policing and syringe sharing persisted.
after extensive covariate adjustment, including adjustment for intensity of drug use. Likewise, if we had recruited respondents only through the drop-in centres, our sample may have been biased in that they may have been more visible to police and more likely to have encounters with police and share syringes than those who never used the drop-in centres. However, 20% of our sample included those who never visited the drop-in centres, and access to the drop-in centres was not associated with the outcome. Lastly, as the study sample was not randomly selected, our findings may not be generalizable to other populations of IDU in Thailand.

In summary, we found that a substantial proportion of a community-recruited sample of IDU in Bangkok reported engaging in syringe sharing, and exposures to two types of specific policing practices were independently associated with this form of HIV risk behaviour in this population, with experiencing both practices showing the strongest association. The relationship between repressive drug policing and HIV risk identified in the present study is significant in view of the need to achieve the internationally agreed, time-bound goal of halving HIV transmission among IDU by 2015 as well as the domestic goal of reducing new HIV infections by two-thirds by 2016. Taken in sum, these findings highlight the importance of addressing the policy and social environment surrounding IDU in ongoing HIV prevention efforts.
Table 6: Bivariate analyses of factors associated with syringe sharing in the past 6 months among 435 IDU in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total n (%)</th>
<th>Syringe sharing in the past 6 months</th>
<th>Prevalence Ratio (95%CI)</th>
<th>r</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes 75 (17.2%)</td>
<td>No 360 (82.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exposures to policing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever beaten and recently tested for drugs* by police</td>
<td>57 (13.1%)</td>
<td>16 (21.3%)</td>
<td>41 (11.4%)</td>
<td>2.61</td>
<td>(1.46 – 4.65)</td>
</tr>
<tr>
<td>Recently tested for drugs* by police only</td>
<td>60 (13.8%)</td>
<td>14 (18.7%)</td>
<td>46 (12.8%)</td>
<td>2.17</td>
<td>(1.18 – 3.99)</td>
</tr>
<tr>
<td>Ever beaten by police only</td>
<td>123 (28.3%)</td>
<td>24 (32.0%)</td>
<td>99 (27.5%)</td>
<td>1.81</td>
<td>(1.06 – 3.11)</td>
</tr>
<tr>
<td>Never beaten or recently tested for drugs* by police (reference)</td>
<td>195 (44.8%)</td>
<td>21 (28.0%)</td>
<td>174 (48.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 38 years old</td>
<td>205 (27.1%)</td>
<td>37 (49.3%)</td>
<td>168 (46.7%)</td>
<td>1.09</td>
<td>(0.72 – 1.65)</td>
</tr>
<tr>
<td>≥ 38 years old</td>
<td>230 (52.9%)</td>
<td>38 (50.7%)</td>
<td>192 (53.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>351 (80.7%)</td>
<td>66 (88.0%)</td>
<td>285 (79.2%)</td>
<td>1.76</td>
<td>(0.91 – 3.38)</td>
</tr>
<tr>
<td>Female</td>
<td>84 (19.3%)</td>
<td>9 (12.0%)</td>
<td>75 (20.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIV serostatus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>80 (18.4%)</td>
<td>16 (21.3%)</td>
<td>64 (17.8%)</td>
<td>1.20</td>
<td>(0.73 – 1.98)</td>
</tr>
<tr>
<td>Negative or unknown</td>
<td>355 (81.6%)</td>
<td>59 (78.7%)</td>
<td>296 (82.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heroin injection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Weekly</td>
<td>94 (21.6%)</td>
<td>26 (34.7%)</td>
<td>68 (18.9%)</td>
<td>1.92</td>
<td>(1.27 – 2.92)</td>
</tr>
<tr>
<td>≤ Weekly</td>
<td>341 (78.4%)</td>
<td>49 (65.3%)</td>
<td>292 (81.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Midazolam injection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Weekly</td>
<td>238 (54.7%)</td>
<td>51 (68.0%)</td>
<td>187 (51.9%)</td>
<td>1.76</td>
<td>(1.13 – 2.75)</td>
</tr>
<tr>
<td>≤ Weekly</td>
<td>197 (45.3%)</td>
<td>24 (32.0%)</td>
<td>173 (48.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Methamphetamine injection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Weekly</td>
<td>88 (20.2%)</td>
<td>19 (25.3%)</td>
<td>69 (19.2%)</td>
<td>1.34</td>
<td>(0.84 – 2.13)</td>
</tr>
<tr>
<td>≤ Weekly</td>
<td>347 (79.8%)</td>
<td>56 (74.7%)</td>
<td>291 (80.8%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; CI: Confidence Interval. r: Pearson’s correlation coefficient.
*denotes activities/events in the past 6 months.
Table 6: Bivariate analyses of factors associated with syringe sharing in the past 6 months among 435 IDU in Bangkok, Thailand (continued)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total n (%)</th>
<th>Syringe sharing in the past 6 months</th>
<th>Prevalence Ratio (95%CI)</th>
<th>r</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes 75 (17.2%)</td>
<td>No 360 (82.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystal methamphetamine injection*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Weekly</td>
<td>19 (4.4%)</td>
<td>4 (5.3%)</td>
<td>15 (4.2%)</td>
<td>1.23 (0.50 – 3.02)</td>
<td>0.02</td>
</tr>
<tr>
<td>≤ Weekly</td>
<td>416 (95.6%)</td>
<td>71 (94.7%)</td>
<td>345 (95.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of drugs in combination*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>248 (57.0%)</td>
<td>48 (64.0%)</td>
<td>200 (55.6%)</td>
<td>1.34 (0.87 – 2.06)</td>
<td>0.06</td>
</tr>
<tr>
<td>No</td>
<td>187 (43.0%)</td>
<td>27 (36.0%)</td>
<td>160 (44.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binge drug use*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>130 (29.9%)</td>
<td>29 (38.7%)</td>
<td>101 (28.1%)</td>
<td>1.48 (0.97 – 2.24)</td>
<td>0.09</td>
</tr>
<tr>
<td>No</td>
<td>305 (70.1%)</td>
<td>46 (61.3%)</td>
<td>259 (71.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injected with others on a frequent basis*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 75% of time</td>
<td>168 (38.6%)</td>
<td>37 (49.3%)</td>
<td>131 (36.4%)</td>
<td>1.55 (1.03 – 2.33)</td>
<td>0.10</td>
</tr>
<tr>
<td>≤ 75% of time</td>
<td>267 (61.4%)</td>
<td>38 (50.7%)</td>
<td>229 (63.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessed voluntary drug treatment*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>194 (44.6%)</td>
<td>39 (52.0%)</td>
<td>155 (43.1%)</td>
<td>1.35 (0.89 – 2.03)</td>
<td>0.07</td>
</tr>
<tr>
<td>No</td>
<td>241 (55.4%)</td>
<td>36 (48.0%)</td>
<td>205 (56.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty accessing sterile syringes*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes or sometimes</td>
<td>21 (4.8%)</td>
<td>9 (12.0%)</td>
<td>12 (3.3%)</td>
<td>2.69 (1.56 – 4.62)</td>
<td>0.15</td>
</tr>
<tr>
<td>No</td>
<td>414 (95.2%)</td>
<td>66 (88.0%)</td>
<td>348 (96.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever accessed drop-in centers for drug users</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>349 (80.2%)</td>
<td>58 (77.3%)</td>
<td>291 (80.8%)</td>
<td>0.84 (0.52 – 1.37)</td>
<td>-0.03</td>
</tr>
<tr>
<td>No</td>
<td>86 (19.8%)</td>
<td>17 (22.7%)</td>
<td>69 (19.2%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; CI: Confidence Interval. r: Pearson’s correlation coefficient.
*denotes activities/events in the past 6 months.
<table>
<thead>
<tr>
<th>Variable</th>
<th>APR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exposures to policing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ever beaten &amp; drug testing* by police vs. None)</td>
<td>2.40</td>
<td>(1.35 – 4.26)</td>
<td>0.003</td>
</tr>
<tr>
<td>(Drug testing* by police only vs. None)</td>
<td>2.00</td>
<td>(1.16 – 3.45)</td>
<td>0.012</td>
</tr>
<tr>
<td>(Ever beaten by police only vs. None)</td>
<td>1.82</td>
<td>(1.04 – 3.20)</td>
<td>0.037</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Male vs. Female)</td>
<td>1.42</td>
<td>(0.72 – 2.82)</td>
<td>0.310</td>
</tr>
<tr>
<td><strong>Injected with others on a frequent basis</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&gt;75% of time vs. ≤ 75% of time)</td>
<td>1.59</td>
<td>(1.06 – 2.39)</td>
<td>0.024</td>
</tr>
<tr>
<td><strong>Accessed voluntary drug treatment</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>1.60</td>
<td>(1.11 – 2.30)</td>
<td>0.011</td>
</tr>
<tr>
<td><strong>Difficulty accessing sterile syringes</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes or sometimes vs. No)</td>
<td>2.81</td>
<td>(1.88 – 4.19)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; APR: adjusted prevalence ratio; CI: Confidence Interval.
*denotes activities/events in the past 6 months.
Figure 2: Adjusted prevalence ratios for syringe sharing in the past 6 months by types of exposures to policing among 435 IDU in Bangkok, Thailand

Adjusted PRs

- Ever beaten by police only: 1.82
- Recently* tested for drugs by police only: 2.00
- Ever beaten and recently* tested for drugs by police: 2.40

Adjusted for gender; injected with others on a frequent basis*; enrolment in voluntary drug treatment*; and difficulty in accessing sterile syringes.*

*denotes activities/events in the past 6 months.
CHAPTER 7: INCREASING AVAILABILITY OF ILlicit DRUGS AMONg PEOPLE WHO INJECT DRUGS IN BANGKOK, THAILAND

7.1 Introduction

Situated along some of the world’s major drug trafficking routes,229 Thailand has been contending with a longstanding epidemic of illicit drug use.17 In response, the Thai government initiated a series of aggressive prohibitionist responses. Since the 1990s, there has been a dramatic increase in incarceration rates for drug-related offenders.53 In 2002, a system of compulsory drug detention was introduced and has been rapidly expanded in recent years.27 In 2010, the ONCB reported that 116,500 people were admitted to drug treatment facilities, and as many as 63% of these “patients” were in compulsory drug detention for “treatment.”39

Since August 2011, Thai authorities have further intensified repressive drug policing.44,189 Although the extent to which these efforts have affected the supply of and demand for illicit drugs is unknown, available data paint an unfavorable picture. Recent media reports indicated an illicit drug trade “boom” within prisons, with only seven of 143 prisons in the country being free of drug trading.230,231 As well, a previous study suggested that compulsory drug detention has not reduced drug use among IDU in Bangkok, as drug use typically eventually resumes after release from detention.216 Further, intensified drug control campaigns have resulted in police misconduct and fatal shootings of suspects, raising concern regarding how drug suppression operations were being implemented.200,201

While the Thai government continues to rely on repressive drug policing as a means of suppressing the trade of illicit drugs, we know of no studies that have identified trends in street-level availability of illicit drugs in Thailand. The existence of a serial cross-sectional study of IDU in Bangkok enabled us to collect data on
street-level drug availability at two different time points, the latter of which followed a period of renewed and intensified crackdowns on drugs in 2011. Therefore, our study objective was to assess changes between 2009 and 2011 in the availability of five substances that are commonly used among IDU in Bangkok. As well, we sought to examine social, structural and individual factors influencing drug availability.

7.2 Methods

Quantitative data for this study were derived from the Mitsampan Community Research Project, as described in detail in section 1.6.

Items assessing the availability of illicit drugs were included in the questionnaires administered in both 2009 and 2011. The availability of a set of five substances (i.e., heroin, methamphetamine pills [locally referred to as yaba], crystal methamphetamine [locally referred to as ice], midazolam tablets [short-acting benzodiazepine available through private clinics], and methadone for illicit use) were assessed at five levels: (1) available within 10 minutes; (2) available within 90 minutes; (3) available within a day; (4) available in more than a day; and (5) do not know the availability. Respondents were asked to indicate “[h]ow difficult would it be for you to get the following drugs right now in the area where you typically obtain your drugs? Please answer even if you don’t use the drugs yourself” and were also asked to indicate the current street price of each substance. This question item has been used to assess the street-level availability of illicit drugs in a previous study in another setting.232

Respondents who completed the interview in 2009 or 2011 were eligible for inclusion in the study. For this study, we excluded individuals who did not know the availability of the drugs in question or those with incomplete data. Further, the sample for each substance was restricted to individuals who reported having used
the substance in question in the past six months. Given that the primary purpose of the study was to assess changes in the availability of drugs (at the time of the interview) between 2009 and 2011, repeat respondents were included in each year’s sample. As a sensitivity analysis, we repeated the univariate and multivariate analyses described below using smaller samples that excluded repeat respondents from the 2011 data set.

As in a previous study,\textsuperscript{232} we conceptualized the availability of the five substances as being an aspect of supply, rather than demand for the substances in question. Informed by the modified Risk Environment Framework described in section 1.4, we hypothesized that both social/structural factors and individual characteristics were potentially associated with availability. The intensified drug suppression campaign in 2011 was considered a macro-structural factor that may be associated with availability. This variable was operationalized as the calendar year of study enrolment (2011 vs. 2009). The meso-level social and environmental factors included: ever in prison (yes vs. no) and ever in compulsory drug detention (yes vs. no). The micro-level social and environmental factors included drug dealing involvement in the past six months (yes vs. no). The individual characteristics included age (≤ 35 years vs. 36-45 years vs. ≥ 46 years), gender (female vs. male), and frequent use of each drug of interest in the past six months (> once per week vs. ≤ once per week). Drug dealing involvement was ascertained by asking whether drug dealing (i.e., selling or transporting illicit drugs) constituted a source of income in the past six months. Dealing status and frequent use of drugs were considered indicative of stronger contact with a given drug supply chain. Given recent government and media reports indicating large-scale drug dealing in prisons,\textsuperscript{230,231} a history of incarceration and compulsory drug detention were also hypothesized to increase the ease of illicit-drug availability as relationships between IDU and drug
dealers may have been established or expanded while in detention. We note that all data used in our study were self-reported data, which may reflect some potential biases.

As a first step, we examined sample characteristics using descriptive statistics. We also examined frequencies of drugs used more than twice per week in the past six months in an effort to capture primary drugs used among the sample. Then, we plotted univariate trends of the availability of the five drugs between 2009 and 2011. Given low levels of responses for the availability in > 90 minutes up to one day and > 1 day, we combined these categories, thus providing us with a three-level ordered outcome variable: immediate availability (available in ≤ 10 minutes); moderate availability (available in > 10 minutes to ≤ 90 minutes); and delayed availability (available in > 90 minutes). To examine univariate associations between the three levels of availability for each drug and the explanatory variables, we used the Kruskal-Wallis test.

The distributions of the responses of the explanatory variables over the three-level outcome variables indicated that the proportional odds assumption did not hold. Therefore, we fitted separate multivariate logistic regression models assessing the adjusted odds of moderate availability vs. delayed availability, and immediate availability vs. delayed availability for each drug of interest. We used an *a priori*-defined statistical protocol based on examination of the AIC and *p*-values to construct an explanatory multivariate logistic regression model. First, we constructed a full model including all variables analyzed in univariate analyses. After examining the AIC of the model, we removed the variable with the largest *p*-value and built a reduced model while keeping the calendar year of study involvement in the model. We continued this iterative process until no variables
remained for inclusion. We selected the multivariate model with the lowest AIC score. All p-values were two-sided.

As a sub-analysis, we examined changes in the street price of each drug between 2009 and 2011. Unfortunately, items assessing drug purity were not included in the questionnaire, and therefore we were unable to adjust the prices for drug purity, which may have changed between the two years. Because the reported prices of drugs had highly skewed distributions and there was heterogeneity in retail units, presumably due to the unregulated nature of illicit drug markets, we presented the modal price and unit of each drug, as well as the percentage of the study sample that reported the modal price and unit. All statistical analyses were performed with SPSS software version 18.0.0 (IBM, Armonk, New York, USA).

7.3 Results

7.3.1 Summary statistics

Summary statistics on the covariates included in the analysis are provided in Table 8. As shown, a total of 718 IDU (293 IDU in 2009 and 425 IDU in 2011) participated in this study, including 165 (23.0%) women. The median age was 38 years (interquartile range: 33 – 47 years). In total, 7.4% of the sample reported obtaining income from drug dealing in the past six months. The most commonly used drug in the past six months among the sample was midazolam (75.6%), followed by methamphetamine (67.3%) and heroin (60.7%). The prevalence of crystal methamphetamine use was substantially higher among the respondents in 2011 (32.9%) than in 2009 (5.8%), while the prevalence of use of other drugs remained relatively stable over the two calendar years. The majority of respondents (66.4%) reported using multiple drugs more than twice per week in the past six months.
7.3.2 Univariate trends in availability

Trends in the availability of the five drugs assessed are plotted in Figure 3. As shown, immediate availability of all drugs, except for heroin, increased between 2009 and 2011. Moderate availability of all drugs also increased, while delayed availability of all drugs declined. Changes in the immediate availability of crystal methamphetamine were the most pronounced, increasing almost six-fold (from 5.9% in 2009 to 35.7% in 2011) between 2009 and 2011. Although immediate availability of heroin slightly decreased from 8.3% in 2009 to 7.8% in 2011, there was a marked increase in the moderate availability of heroin, increasing from 47.7% in 2009 to 68.3% in 2011.

The results of univariate analyses showed significant associations between the calendar year of study enrolment and the availability of all drugs, except for methamphetamine (all \( p < 0.01 \)). Other significant findings included associations between: the availability of heroin and a history of compulsory drug detention (\( p < 0.01 \)); the availability of methamphetamine and female gender (\( p = 0.02 \)); the availability of methamphetamine and a history of incarceration (\( p = 0.02 \)); and the availability of illicit methadone and age (\( p = 0.02 \)).

7.3.3 Multivariate analyses

Table 9 shows the results from the final multivariate logistic regression models. After controlling for other covariates, there were significant increases in moderate availability of all drugs (compared to delayed availability) between 2009 and 2011, with adjusted odds ratios ranging between 2.36 (for illicit methadone) and 4.61 (for crystal methamphetamine) (all \( p < 0.01 \)). Similarly, immediate availability of all drugs but heroin (compared to delayed availability) also increased significantly between 2009 and 2011 (all \( p < 0.01 \)). Female gender was independently and positively associated with immediate availability of methamphetamine, while
involvement in drug dealing was independently and negatively associated with moderate availability of methamphetamine. Illicit methadone was generally more immediately available to younger individuals. A history of incarceration was independently and positively associated with more immediate availability of methamphetamine, whereas a history of compulsory drug detention exposure was independently and negatively associated with more immediate availability of heroin and midazolam.

The results of the sensitivity analysis were consistent with the primary analysis, while smaller sample sizes reduced the statistical power of the multivariate logistic regression models. In brief, after controlling for other covariates, there were significant increases in moderate availability of all drugs (compared to delayed availability) between 2009 and 2011, with adjusted odds ratios ranging between 2.88 (for midazolam) and 5.35 (for crystal methamphetamine) (all \( p < 0.05 \)). Similarly, immediate availability of all drugs but heroin (compared to delayed availability) also increased significantly between 2009 and 2011 (all \( p < 0.01 \)). The list of the factors independently associated with the outcomes in the primary analysis remained the same (including the directions) in the sensitivity analysis.

### 7.3.4 Sub-analysis

The modal street price of all drugs reported by the respondents remained the same between 2009 and 2011. As shown in Table 10, the modal price of heroin was 500 Thai baht (approximately US $17) per tua (approximately 50mg of powder). The modal price of methamphetamine was 200 Thai baht (approximately US $7) per one pill. The modal price of crystal methamphetamine was 2,500 Thai baht (approximately US $83) per gee (approximately 1g). The modal price of midazolam was 80 Thai baht (approximately US $3) per one pill. The modal price of illicit methadone was 500 Thai baht (approximately US $17) per 60ml bottle.
7.4 Discussion

We found, among community-recruited samples of IDU in Bangkok, that the perceived availability of heroin, methamphetamine, crystal methamphetamine, midazolam, and illicit methadone increased significantly between 2009 and 2011. Although the self-reported data used in our study may have affected our study findings, these increases in perceived availability of five illicit substances were independent of observed differences in the meso- and micro-level social and environmental factors and individual characteristics of the samples recruited through the two waves of the study, and occurred during a period in which the retail price of all drugs analyzed appeared to be constant. Consistent with the suggestions of various recent reports in Thailand, our findings indicated an increased supply of illicit drugs in Bangkok between June-July of 2009 and July-October of 2011 despite the intensified drug suppression efforts that have been undertaken since August 2011.

The largest increase in availability was found with crystal methamphetamine, and the proportion of crystal methamphetamine users among our sample also increased significantly between 2009 and 2011. The ONCB report also suggests an expansion of the crystal methamphetamine market in Thailand in recent years, documenting a 3.5-fold increase in seizures and a 2.5-fold increase in admissions to drug treatment facilities related to crystal methamphetamine between 2009 and 2010. The same report also documented almost a two-fold increase in seizures of methamphetamine pills between 2009 and 2010. Taken together with these seizure statistics, our findings suggest that the growth of the amphetamine-type stimulants (ATS) market has continued through 2011. Interestingly, our findings showed a simultaneous increase in ease of accessing heroin while the level of heroin seizures remained almost the same between 2009 and 2010. The disparity may be likely due
to the fact that seizures statistics are unable to fully capture fluctuations in illicit drug markets.236

Importantly, increases in the availability of methamphetamine were associated with exposures to prison environments. The findings are of particular interest given that between 2011 and 2012, Thai authorities implemented a six-month crackdown in prisons across the country and seized a total of 58,991 methamphetamine pills.237 Also, the majority of drug-related prisoners in Thailand (95%) are reportedly convicted for drug-related offenses involving methamphetamine.54 In light of these reports, while temporal ordering was not observed, our findings may indicate that incarceration of IDU may have led to the formation of new social network in a way to increase the ease of future drug purchases after release from prisons. Alternatively, it may be that those who had closer contact with methamphetamine dealers were more likely to have been incarcerated and yet incarceration did not disconnect them from drug dealers upon release. These findings raise concern about negative consequences of the ongoing drug policing efforts in Thailand, which involve the mass incarceration of people who use drugs.

Our findings also provide some insights into illegal drug market operations in Bangkok. While previous literature from North America suggested that street-level drug users typically engage in drug dealing as a means to maintain their drug-using habit,233,238,239 the proportion of individuals involved in drug dealing in our sample was low. Also, drug-dealing status had somewhat unanticipated associations with the availability of illicit drugs, as it was not associated with easier access to any drugs. On the contrary, it was negatively associated with moderate availability of methamphetamine. While the differential associations between the involvement in drug dealing and availability of each drug are unknown, the
findings may indicate that the structure of illegal drug markets in Thailand is different from that in North America, which typically involves a decentralized pyramid system, as previously suggested by researchers in northern Thailand.

We also found that female IDU were more likely to report immediate availability of methamphetamine. A possible explanation for this association may be that female IDU are often asked by their male partners and friends to acquire drugs because they believe that women are less likely to be caught by police. Therefore, women may have stronger contact with a given drug supply chain. Consistent with this explanation, our previous study showed that female IDU were less likely than males to have been incarcerated in this setting, and females comprise only 15% of the inmate population in the country. However, it is important to note that the vast majority of female inmates (82%) are incarcerated as a result of drug-related offences. A recent media report also suggested that drug market involvement was a major factor contributing to incarceration among women. Nonetheless, the extent to which female inmates were involved in drug markets, or the reason that female gender was associated with the availability of methamphetamine only in the present study, is unknown.

Collectively, our findings have important implications for drug policy and programming in Thailand. The findings suggest that despite the Thai government’s longstanding and significant investment in drug suppression efforts, illicit drug markets continue to flourish in the country. Under such circumstances, and given the fact that addiction is a chronic, relapsing disorder, it is important to address treatment and care needs of those who continue to engage in drug use. Specifically, consistent with the recent joint statement and recommendations by the twelve UN entities, the ongoing reliance on compulsory drug detention as a means of linking people to drug treatment should be shifted toward a focus on providing voluntary,
scientifically sound, long-term drug treatment in community settings that is accessible to those who need it. In addition, given the ongoing epidemic of HIV among Thai IDU and continued high rates of HIV risk behaviour (i.e., syringe sharing) among this population, evidence-based HIV prevention services tailored for IDU, such as sterile syringe distribution and peer-based harm reduction services, need to be urgently scaled up. Currently, there is a significant lack of investment in these services in Thailand, and there have been repeated calls for increasing resource allocation in this area.

This study has several limitations. First, as the study sample was not randomly selected, our findings may not be generalizable to other populations of IDU in Thailand. Second, the self-reported data may have been affected by socially desirable responding or recall bias. However, we note that this type of data has been commonly utilized in other studies pursuing similar enquiries and found to be valid. Third, given the observational nature of this study, the magnitude of changes in the availability of the drugs assessed may have been over- or underestimated due to residual confounding. In particular, the potentially changing mix of respondents over the two waves of surveying may have contributed to such residual confounding. Also, because of the small sample size, there were wide intervals around some of the estimates reported. However, the direction of changes we found was consistent with other reports, including those published by the Thai government, suggesting an expansion of illicit drug markets in Thailand in recent years. Lastly, we were unable to assess fluctuations in drug purity, which may in part explain the trends of street-level availability and price observed herein. Future research should assess the effect of drug purity on the demand and supply of drugs analyzed.
In sum, we found that despite the Thai government’s intensified drug suppression efforts in recent years, the availability of illicit drugs among samples of IDU in Bangkok increased significantly between 2009 and 2011. The street price of all drugs assessed in this study remained the same during the study period. The increases in the availability of methamphetamine were associated with a history of incarceration. These findings raise concern about the Thai government’s continued overreliance on the aggressive drug policing and point to the need for greater investment in scientifically sound drug treatment and harm reduction programming.
Table 8: Characteristics of 718 of IDU in Bangkok, Thailand, participating in the Mitsampan Community Research Project in 2009 and 2011

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total n (%)</th>
<th>Study enrolment</th>
<th></th>
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<td></td>
<td></td>
<td>2011</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>n (column%)</td>
<td>n (column%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>425 (59.2%)</td>
<td>293 (40.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>n (column%)</td>
<td>n (column%)</td>
<td></td>
</tr>
<tr>
<td>Female gender</td>
<td>165 (23.0%)</td>
<td>81 (19.1%)</td>
<td>84 (28.7%)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>304 (42.3%)</td>
<td>167 (39.3%)</td>
<td></td>
</tr>
<tr>
<td>≤ 35 years</td>
<td>137 (46.7%)</td>
<td>213 (29.7%)</td>
<td>130 (44.9%)</td>
<td></td>
</tr>
<tr>
<td>36-45 years</td>
<td>130 (44.9%)</td>
<td>136 (32.0%)</td>
<td>77 (26.3%)</td>
<td></td>
</tr>
<tr>
<td>≥ 46 years</td>
<td>137 (46.7%)</td>
<td>201 (28.0%)</td>
<td>79 (27.0%)</td>
<td></td>
</tr>
<tr>
<td>Drug dealinga</td>
<td>53 (7.4%)</td>
<td>24 (5.6%)</td>
<td>29 (9.9%)</td>
<td></td>
</tr>
<tr>
<td>Drugs used at least oncea:</td>
<td></td>
<td>436 (60.7%)</td>
<td>243 (57.2%)</td>
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</tr>
<tr>
<td>Heroin</td>
<td></td>
<td>193 (65.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>483 (67.3%)</td>
<td>263 (61.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystal methamphetamine</td>
<td>157 (21.9%)</td>
<td>140 (32.9%)</td>
<td>17 (5.8%)</td>
<td></td>
</tr>
<tr>
<td>Midazolam</td>
<td>543 (75.6%)</td>
<td>316 (74.4%)</td>
<td>227 (77.5%)</td>
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</tr>
<tr>
<td>Illicit methadone</td>
<td>280 (39.0%)</td>
<td>178 (41.9%)</td>
<td>102 (34.8%)</td>
<td></td>
</tr>
<tr>
<td>Drugs used more than twice per weeka:</td>
<td></td>
<td>189 (26.3%)</td>
<td>94 (22.1%)</td>
<td></td>
</tr>
<tr>
<td>Heroin</td>
<td></td>
<td>95 (32.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>287 (40.0%)</td>
<td>136 (32.0%)</td>
<td>151 (51.5%)</td>
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<tr>
<td>Crystal methamphetamine</td>
<td>58 (8.1%)</td>
<td>55 (12.9%)</td>
<td>3 (1.0%)</td>
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</tr>
<tr>
<td>Midazolam</td>
<td>424 (59.1%)</td>
<td>233 (54.8%)</td>
<td>191 (44.9%)</td>
<td></td>
</tr>
<tr>
<td>Illicit methadone</td>
<td>334 (46.5%)</td>
<td>211 (49.6%)</td>
<td>123 (42.0%)</td>
<td></td>
</tr>
<tr>
<td>Ever in prison</td>
<td>563 (78.4%)</td>
<td>316 (74.4%)</td>
<td>247 (84.3%)</td>
<td></td>
</tr>
<tr>
<td>Ever in compulsory drug detention</td>
<td>137 (19.1%)</td>
<td>78 (18.4%)</td>
<td>59 (20.1%)</td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs.

a denotes activities during the 6 months prior to the interview.
Table 9: Multivariate analyses of factors associated with the availability of drugs among a community-recruited sample of IDUs in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Heroin (n=436) AOR (95% CI)</th>
<th>Methamphetamine (n=483) AOR (95% CI)</th>
<th>Crystal methamphetamine (n=157) AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study enrolment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2011 vs. 2009) Immediate vs. Delayed</td>
<td>1.67 (0.78 – 3.61)</td>
<td>4.20 (1.96 – 9.00)**</td>
<td>23.53 (2.66 – 208.36)**</td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td>2.89 (1.85 – 4.51)**</td>
<td>2.81 (1.41 – 5.61)**</td>
<td>4.61 (1.46 – 14.63)**</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Female vs. Male) Immediate vs. Delayed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td>0.58 (0.31 – 1.08)</td>
<td>2.39 (1.05 – 5.45)**</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(36-45 vs. ≥ 46 yrs) Immediate vs. Delayed</td>
<td>0.72 (0.41 – 1.25)</td>
<td></td>
<td>0.48 (0.10 – 2.19)</td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td></td>
<td></td>
<td>0.31 (0.08 – 1.28)</td>
</tr>
<tr>
<td>(≤ 35 vs. ≥ 46 yrs) Immediate vs. Delayed</td>
<td>1.38 (0.79 – 2.40)</td>
<td></td>
<td>1.31 (0.28 – 6.15)</td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td></td>
<td></td>
<td>0.77 (0.18 – 3.27)</td>
</tr>
<tr>
<td><strong>Drug dealing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No) Immediate vs. Delayed</td>
<td>2.55 (0.88 – 7.39)</td>
<td></td>
<td>0.32 (0.12 – 0.85)*</td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Use of each drug of interest</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&gt; Weekly vs. ≤ Weekly) Immediate vs. Delayed</td>
<td>1.74 (1.10 – 2.74)*</td>
<td></td>
<td>1.90 (0.93 – 3.90)</td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ever in prison</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No) Immediate vs. Delayed</td>
<td></td>
<td>3.87 (1.72 – 8.71)**</td>
<td></td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td></td>
<td>2.43 (1.19 – 4.96)*</td>
<td></td>
</tr>
<tr>
<td><strong>Ever in compulsory drug detention</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No) Immediate vs. Delayed</td>
<td>0.16 (0.04 – 0.72)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate vs. Delayed</td>
<td>0.41 (0.24 – 0.70)**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; AOR: adjusted odds ratio; CI: confidence interval; Immediate: immediately available (within 10 min.); Moderate: moderate availability (available in > 10 min. to ≤ 90 min.); Delayed: delayed availability (available in > 90 min.).

*p<0.05; **p<0.01.

*a* denotes activities during the 6 months prior to the interview.

Empty cells reflect variables that had large p-values and were removed from the final multivariate logistic regression models according to the a priori-defined statistical protocol.
Table 9: Multivariate analyses of factors associated with the availability of drugs among a community-recruited sample of IDUs in Bangkok, Thailand (continued)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Midazolam (n=543) AOR (95% CI)</th>
<th>Illicit methadone (n=280) AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study enrolment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2011 vs. 2009)</td>
<td>Immediate vs. Delayed 2.84 (1.71 – 4.73)**</td>
<td>4.42 (2.07 – 9.46)**</td>
</tr>
<tr>
<td></td>
<td>Moderate vs. Delayed 2.42 (1.58 – 3.72)**</td>
<td>2.36 (1.33 – 4.19)**</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Immediate vs. Delayed</td>
<td></td>
</tr>
<tr>
<td>(Female vs. Male)</td>
<td>Moderate vs. Delayed</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Immediate vs. Delayed 1.24 (0.64 – 2.39)</td>
<td>3.74 (1.44 – 9.71)**</td>
</tr>
<tr>
<td>(36-45 vs. ≥46 yrs)</td>
<td>Moderate vs. Delayed</td>
<td>2.33 (1.12 – 4.86)*</td>
</tr>
<tr>
<td></td>
<td>(≤35 vs. ≥46 yrs)</td>
<td>Immediate vs. Delayed 1.83 (0.98 – 3.43)</td>
</tr>
<tr>
<td>Drug dealing*</td>
<td>Immediate vs. Delayed 1.99 (0.83 – 4.77)</td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>Moderate vs. Delayed</td>
<td></td>
</tr>
<tr>
<td><strong>Use of each drug of interest</strong></td>
<td>Immediate vs. Delayed 0.46 (0.27 – 0.79)**</td>
<td>0.35 (0.08 – 1.50)</td>
</tr>
<tr>
<td>(&gt; Weekly vs. ≤ Weekly)</td>
<td>Moderate vs. Delayed</td>
<td></td>
</tr>
<tr>
<td><strong>Ever in prison</strong></td>
<td>Immediate vs. Delayed 0.55 (0.33 – 0.93)*</td>
<td>2.19 (0.94 – 5.14)</td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>Moderate vs. Delayed</td>
<td></td>
</tr>
<tr>
<td><strong>Ever in compulsory drug detention</strong></td>
<td>Immediate vs. Delayed</td>
<td></td>
</tr>
<tr>
<td>(Yes vs. No)</td>
<td>Moderate vs. Delayed</td>
<td></td>
</tr>
</tbody>
</table>

IDU: people who inject drugs; AOR: adjusted odds ratio; CI: confidence interval; Immediate: immediately available (within 10 min.); Moderate: moderate availability (available in > 10 min. to ≤ 90 min.); Delayed: delayed availability (available in > 90 min.).

*p<0.05; **p<0.01.

*denotes activities during the 6 months prior to the interview.

Empty cells reflect variables that had large p-values and were removed from the final multivariate logistic regression models according to the a priori-defined statistical protocol.
Table 10: Modal retail price and unit of five substances reported by a community-recruited sample of IDU in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Substance</th>
<th>Year</th>
<th>Modal price and unit</th>
<th>% reporting the modal price and unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heroin</strong> $(n=436)$</td>
<td>2009</td>
<td>500 Baht (approx. US$17)/approx. 50mg</td>
<td>80.6%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>500 Baht (approx. US$17)/approx. 50mg</td>
<td>68.5%</td>
</tr>
<tr>
<td><strong>Methamphetamine</strong> $(n=483)$</td>
<td>2009</td>
<td>200 Baht (approx. US$7)/pill</td>
<td>55.0%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>200 Baht (approx. US$7)/pill</td>
<td>45.2%</td>
</tr>
<tr>
<td><strong>Crystal methamphetamine</strong> $(n=157)$</td>
<td>2009</td>
<td>2,500 Baht (approx. US$83)/approx. 1g</td>
<td>35.3%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>2,500 Baht (approx. US$83)/approx. 1g</td>
<td>23.6%</td>
</tr>
<tr>
<td><strong>Midazolam</strong> $(n=543)$</td>
<td>2009</td>
<td>80 Baht (approx. US$3)/pill</td>
<td>59.0%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>80 Baht (approx. US$3)/pill</td>
<td>34.8%</td>
</tr>
<tr>
<td><strong>Illicit methadone</strong> $(n=280)$</td>
<td>2009</td>
<td>500 Baht (approx. US$17)/60ml bottle</td>
<td>27.5%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>500 Baht (approx. US$17)/60ml bottle</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

IDU: people who inject drugs.
Figure 3: Distributions of immediate, moderate and delayed availability of five substances reported by IDU in Bangkok, Thailand

- **Heroin**
  - 2009
  - 2011

- **Methamphetamine**
  - 2009
  - 2011

- **Crystal methamphetamine**
  - 2009
  - 2011

- **Midazolam**
  - 2009
  - 2011

- **Illicit methadone**
  - 2009
  - 2011

Legend:
- Immediate availability
- Moderate availability
- Delayed availability
CHAPTER 8: CONCLUSION

8.1 Summary of Findings

This dissertation sought to examine the relationship between repressive drug policing and the health of IDU in Bangkok, Thailand. Drawing on a modified version of the Risk Environment Framework, the analyses situated policing practices in a broader social, structural and physical environment and sought to understand various pathways through which policing practices may increase vulnerability to poor health among IDU in Bangkok.

The literature review in Chapter 2 described how repressive drug policing operates within the broader risk environment surrounding illicit drug use and increases IDUs’ vulnerability to poor health in settings throughout the world. It also listed some recommendations for mitigating the adverse impacts of drug policing, as well as the challenges associated with such efforts. The results indicated that aggressive drug policing could harm IDU directly through various forms of police violence and indirectly through multiple pathways. While a large body of literature exists on this topic, previous studies have tended to focus on the aggregate effects and consequences of police crackdowns rather than on specific policing tactics. The review also highlighted that most of the interventions that sought to align police actions with public health goals (e.g., police training on harm reduction) lacked rigorous evaluation.

Using in-depth, qualitative interview data obtained from a community-recruited sample of IDU in Bangkok, Chapter 3 sought to characterize the circumstances and situational factors surrounding encounters with police, analyze specific policing tactics employed during these encounters, and explore IDUs’ reactions to these encounters. Respondents indicated that drug policing had
intensified since rapid urine toxicology testing became widely available to police. They reported various forms of police misconduct, including false accusations, coercion of confessions, excessive use of force, and extortion of money. However, respondents were reluctant to report police misconduct to the authorities in the face of social and structural barriers to seeking justice. Respondents’ strategies to avoid police impeded their access to healthcare, fostered risky injection behaviours, and facilitated the misuse of prescribed pharmaceuticals. The findings illustrated that drug policing in Bangkok is characterized by severe injustices, grave human rights abuses, and entrenched corruption.

The epidemiological analyses in Chapters 4–6 explored the harm associated with specific policing tactics commonly used against IDU in Bangkok. Specifically, Chapter 4 sought to identify the prevalence and correlates of experiencing police beatings. It found that 38% of a community-recruited sample of IDU in Bangkok experienced beatings by police. Consistent with the findings of the qualitative analysis in Chapter 3, respondents most commonly reported this form of police violence during the interrogation process. In multivariate analyses, experiencing police beating was independently associated with various indicators of drug-related harm, including incarceration, compulsory drug detention, syringe sharing, and reporting barriers to accessing healthcare. These findings suggested that the over-reliance on repressive drug policing in the absence of appropriate police oversight and measures to ensure accountability for police misconduct was contributing to police abuse against IDU in Bangkok and to IDUs’ vulnerability to poor health.

Chapter 5 identified the prevalence and correlates of police-conducted urine drug testing. In this study, 67% of a community-recruited sample of IDU in Bangkok reported having been subjected to urine drug testing by police. The results of multivariate analyses indicated that young people and methamphetamine injectors
were more likely to have been tested. Reports of drug testing by police were also independently and positively associated with incarceration, compulsory drug detention, and healthcare avoidance whereas enrolment in voluntary drug treatment was independently and negatively associated with reports of police drug testing. Taken together with the findings in Chapter 3, these findings indicated that the widespread practice of urine drug testing by police was closely linked to the compulsory drug detention system and might be interfering with IDUs’ access to healthcare and voluntary treatment.

Chapter 6 examined the effects of exposures to two types of policing practices on syringe sharing. It was hypothesized that both experiences of severe police violence (regardless of timing) and a recent direct encounter with police would increase fear of police, and in turn, increase the risk of syringe sharing. Experiences of severe police violence were measured as having been beaten by police anytime in the past, and a recent direct encounter with police was operationalized as having been subjected to urine drug testing by police in the past six months. The outcome of interest in this study was syringe sharing in the past six months. In multivariate analyses, after adjustment for potential social, demographic, and behavioural confounders, syringe sharing was independently associated with exposures to each of the two policing practices, and experiencing both two policing practices had the greatest effect on syringe sharing. These findings highlighted the importance of addressing the policy and social environment surrounding IDU as a means of preventing blood-borne disease transmission.

Chapter 7 sought to assess trends of street-level availability of illicit drugs between 2009 and 2011. Using serial cross-sectional data, this study assessed changes in the street-level availability of five substances commonly used among IDU in Bangkok (i.e., heroin, methamphetamine, crystal methamphetamine,
midazolam, and illicit methadone) between 2009 and 2011. It also sought to examine social, structural, and individual factors influencing the availability of drugs. The study found that, after controlling for changes in respondent characteristics between assessments, in a period of constant nominal illicit drug prices, street-level availability of all substances increased significantly between 2009 and 2011. Also, the availability of methamphetamine was associated with incarceration. Given recent media reports documenting an illicit drug trade “boom” within prisons, the results suggested that incarceration did not disconnect IDU from methamphetamine dealers and may instead have facilitated the formation of new social network in a way to increase the ease of future drug purchases after release from prisons. In summary, these findings suggested that despite the Thai government’s longstanding and significant investment in drug suppression efforts, illicit drug markets continued to flourish in the country.

A synthesis of the findings from all chapters indicated that the strict drug prohibition policy, which relies heavily on criminal law enforcement and compulsory drug detention (i.e., macro-structures), has exerted tremendous influence on policing practices in the streets of Bangkok. Policing practices were further shaped by meso-level social and environmental factors (e.g., police corruption and financial incentives within the police) and involved a number of unlawful practices (e.g., evidence planting), as well as physically and psychologically harmful misconduct (e.g., beatings and humiliation). The findings also suggested that policing practices interacted with other meso-level social and environmental factors (e.g., compulsory detention and incarceration of IDU), micro-level social and environmental factors (e.g., intense police surveillance near methadone clinics), and individual characteristics (e.g., being young), and thereby increased IDUs’ vulnerability to poor health by constraining IDUs’ access to
healthcare, facilitating transitions towards the misuse of midazolam, and prompting risky injection behaviours.

8.2 Human Rights Implications

Collectively, the findings of this dissertation highlight a number of human rights concerns associated with drug policing practices in Bangkok. Using international human rights norms, this section explores concerns that arise from a consideration of the studies as a whole, particularly in relation to police beatings and urinalysis. First, as discussed in Chapter 3, police’s use of excessive force to coerce confessions (e.g., beating, kicking, and using electric shock) is clearly a violation of the right to freedom from torture and cruel, inhuman, and degrading treatment under Article 7 of the ICCPR, which Thailand ratified in 1996. The ICCPR designates this right as non-derogable (Article 4), meaning that the state parties to the ICCPR cannot derogate from their obligations to protect this right under any circumstances, including a public emergency. Furthermore, Thailand is a party to the CAT, and the prohibition of torture is enshrined in Section 32 of the Constitution of Kingdom of Thailand B.E. 2550 (2007). Despite the Thai government’s absolute obligation to protect this right, Chapters 3 and 4 indicate that police beatings of IDU are widespread in Bangkok and that victims of police brutality do not have access to legal remedies, which infringes on the right to an effective remedy under Article 2 of the ICCPR and Section 32 of the Thai constitution.

While the violation of the right to freedom from torture and cruel, inhuman, and degrading treatment is in itself a serious concern, the findings of this dissertation highlight that it also likely serves to undermine the right to health of IDU in Bangkok. Chapters 4 and 6 found that IDU who experienced beatings by police were more likely than those who did not experience beatings to engage in syringe sharing. This is consistent with previous studies from other countries
showing that extrajudicial police actions are associated with syringe sharing among IDU,\textsuperscript{69,81,122} as well as the findings in Chapter 3 indicating that IDU respond to police pressure by engaging in riskier drug-using behaviours. The right to the highest attainable standard of physical and mental health (“the right to health”) is enshrined in a number of international human rights instruments, including Article 25 of the Universal Declaration of Human Rights (UDHR) and Article 12 of the ICESCR, to which Thailand became a party in 1999. In particular, Article 12.2 (c) of the ICESCR states that “the steps to be taken by the State Parties…to achieve the full realization of this right shall include those necessary for…the prevention, treatment and control of epidemic…and other diseases.” A related legal provision can be found in Section 51 of the Thai constitution, which guarantees that a person has “the right to receive public health services.”\textsuperscript{191} The Committee on Economic, Social and Cultural Rights (CESCR), the monitoring body for the ICESCR, has defined violations of the state’s obligation to respect the right to health as when “[s]tate actions, policies or laws…are likely to result in…unnecessary morbidity and preventable mortality” (para. 50).\textsuperscript{192} Police brutality that is found to be independently associated with high-risk behaviour for contracting blood-borne pathogens is congruent with the CESCR’s definition of the violations of the state’s obligations to respect the right to health, particularly the prevention and control of epidemics of infectious diseases, in addition to other strong prohibitions of police brutality in human rights law. The same claim can be made for police’s use of urine drug testing, as this policing practice was also independently associated with syringe sharing.

In addition, the findings from Chapters 3, 4, and 5 indicating that both police beatings and drug testing by police represent an impediment to accessing healthcare among IDU, and suggest that the Thai government should undertake efforts to ensure the accessibility aspect of the right to health among this population.
According to the CESCR, accessibility includes “physical accessibility,” which means “health facilities, goods and services must be within safe physical reach for all sections of the population, especially vulnerable or marginalized groups” (para. 12[b]).

It is likely that widespread use of excessive force and drug testing by police makes IDU perceive health services being out of “safe physical reach.”

The dissertation also raises concern about the degrading procedures of drug testing by police. Respondents’ narratives described in Chapter 3 suggest that the police often order IDU to urinate in public places. This practice likely conflicts with Article 10.1 of the ICCPR, which states that “[a]ll persons deprived of their liberty shall be treated with humanity and with respect for the inherent dignity of the human person,” as well as Article 16 of the CAT, which says that the “State Party shall undertake to prevent…other acts of cruel, inhuman or degrading treatment or punishment which do not amount to torture as defined in article 1, when such acts are committed by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity.” Furthermore, forcible drug testing by police raises concern regarding the right to privacy (Article 17 of the ICCPR) and the right to security of those being tested without their informed consent (Article 9 of the ICCPR). Especially given that urinalysis cannot identify those who pose immediate threats to public security, and in light of the harmful consequences of such testing, forcible drug testing by police violates the human rights norms.

Lastly, a synthesis of findings from Chapters 3 and 5 suggests that the police may be disproportionately conducting urine drug testing to former drug offenders, which can be challenged based on the principle of non-discrimination under Article 26 of the ICCPR. This principle is also enshrined in Section 30 of the Thai constitution, which prohibits “unjust discrimination against a person on the
grounds of the difference in origin, race, language, sex, age, disability, physical or health condition, personal status, economic or social standing, religious belief, education or constitutionally political view.” Moreover, available data indicate that the police compile “blacklists” of suspected or formerly convicted drug dealers and users, which likely explains the observed discriminatory approach to former drug offenders. This practice may infringe on the right to privacy provided under Article 17 of the ICCPR. The Thai constitution also declares that “[a] person shall have the right to be accorded protection against undue exploitation of personal data related to his or her individuality, as provided by law” (Section 35). The findings of this dissertation suggest that drug testing by police may be associated with “undue exploitation of personal data.”

In summary, policing tactics that the Thai police commonly employ against IDU in Bangkok involve abuse of many rights enshrined in the ICCPR and the CAT. These rights abuses are inextricably associated with threats to the right to health in this population. Given that Thailand ratified all relevant international human rights conventions reviewed herein and has already enacted the domestic legislation that guarantees the rights included in these conventions, the Thai government should urgently take effective measures to prevent and address the observed rights abuses. Several recommendations for these measures are described in section 8.5.

### 8.3 Study Strengths and Unique Contributions

This dissertation has several strengths and makes unique contributions to a body of scientific literature on the impacts of drug policing on public health. First, the dissertation demonstrates that the use of a mixed-methods study design resulted in a deeper understanding of some key findings than a single research method would have. Specifically, in the qualitative analysis in Chapter 3, police beatings and the use of urine drug testing by police emerged as key themes (among others)
characterizing IDUs’ encounters with police. Although the qualitative findings contributed to the in-depth understanding of contexts in which the police engaged in these practices, the extent to which these policing practices were employed against IDU was not known, nor could the qualitative analysis discern the effects of different policing practices. The quantitative findings of Chapters 4–6 corroborated the qualitative study findings by showing that experiences with each policing practice were common among a larger sample of IDU in Bangkok. They also identified independent relationships between exposures to the two policing practices and health-related behaviours (i.e., syringe sharing and healthcare access). Thus, the two types of data provided complementary evidence on the harms associated with police beatings and drug testing on IDU in Bangkok and contributed to a deeper understanding of the problems pertaining to these policing practices.

Second, the dissertation generated highly novel evidence on the relationship between repressive drug policing and public health. The novelty of the study findings is attributable, in part, to the involvement of peer researchers in the early stages of research (e.g., when developing research questions). For example, it was the peer researchers who first raised concerns about urine drug testing by police. The author then operationalized this particular policing practice as a measurable variable and developed the study hypotheses. As a result, this dissertation is the first to examine the harm associated with urine drug testing by police. In Chapters 3, 4, and 6, this previously unexplored policing practice was shown to be associated with police abuse and various indicators of drug-related harm. Chapter 7 is also the first to elucidate the association between incarceration and the illegal drug market. It demonstrated that incarceration experiences were associated with more immediate availability of methamphetamine among IDU in Bangkok, even after adjusting for potential confounders. Peer researchers have also verified the plausibility of these
novel study findings with their experiential knowledge. These findings make important contributions to the scientific literature and have direct implications for policy. In addition, the dissertation highlights the value of a community-based research approach in ensuring that research products directly address real-world concerns.92,93

Third, the dissertation successfully made use of serial cross-sectional data and produced novel knowledge about the relationship between drug policing and the illegal drug market in Bangkok. While reducing the supply of illicit drugs is one of the major goals of drug suppression efforts, changes in the illegal drug market are rarely evaluated due to difficulties in obtaining data. The Mitsampan Community Research Project was uniquely positioned to contribute scientific evidence in this area, as it collected data on street-level drug availability at two different times, the latter of which followed a period of intensified crackdowns on illicit drug use in 2011. Chapter 7 found that street-level availability of all five drugs analyzed increased significantly between 2009 and 2011. The findings highlight the limitations of policing efforts to suppress the illegal drug market and add further weight to the need for greater support for and investment in scientifically sound drug treatment and harm reduction programming for IDU.

Lastly, the dissertation makes a contribution to the scientific evidence base demonstrating that human rights violations are core features of the risk environment and barriers to care in this setting.98 As described in Chapter 2, few scientific studies have applied human rights norms to investigations of the impacts of drug policing on the health of IDU. The dissertation accomplished this by embedding human rights factors in the data collection instruments that were also informed by the Risk Environment Framework. Chapter 3 highlighted numerous human rights infringements committed by police officers, and Chapters 4 and 6
demonstrated that reports of police beatings were associated with syringe sharing and reporting barriers to healthcare. Chapters 3, 5, and 6 revealed that police’s use of urine drug testing was an affront to human rights principles, and this practice was associated with indicators of vulnerability to poor health among IDU. The empirical evidence of this kind is useful in informing humane and pragmatic drug policy, especially given a growing recognition among scholars, policy makers, and UN agencies that human rights norms and principles should guide international drug policy.\textsuperscript{11,180,247}

8.4 Limitations

Like all research, the work presented in this dissertation has limitations. While the limitations of each study are described in detail in the individual chapters, those common to all studies are briefly noted here. First, self-reported data may have been affected by various kinds of reporting biases, including socially desirable responding and recall biases. However, the study interviewers employed several measures to minimize the likelihood of bias, including asking questions about sensitive matters later in the interview process and cross-checking the responses and narratives to improve recall during interviews. In addition, given that experiences with police involve sensitive information, extra efforts were made to assure the confidentiality and anonymity of responses. For example, all interviews were conducted in private space, any personally identifiable information was not collected or removed from the data, and interviewers emphasized that the study has no connection with the state authorities. It should also be noted that self-reported data have been commonly used in other epidemiological studies on illicit drug use and found to be valid.\textsuperscript{209,210,248} Second, as all data were translated from Thai into English, linguistic nuances may have been lost in translation. However, translated interview transcripts and survey data, as well as manuscripts of all studies, were
reviewed by the Thai research partners and interviewer, who are fluent in English. Lastly, as with all observational research, causality cannot be inferred from the findings of this dissertation. Also, as the study sample was not randomly selected, the generalizability of the findings is limited. The median age of the study samples (37-38 years) indicates that experiences of younger IDU may have been underrepresented in this dissertation. While all quantitative studies employed multivariate regression techniques to account for potential confounders, the results may have been affected by unobserved or residual confounding.

8.5 Recommendations

Specific recommendations resulting from each empirical analysis are included in Chapters 3–7. This section considers all study findings as an entity and highlights recommendations for drug policy and harm reduction measures in Thailand.

First, given the widespread police abuse of IDU observed in this research, the Thai government should urgently institute effective remedies for the victims as well as appropriate measures to prevent further abuse in accordance with law. Although Thailand has a legal framework that prohibits state corruption, excessive use of force, and the use in court of evidence obtained through unlawful means, and provides a mechanism for the victims of police abuse to seek redress, the fact that investigations of police misconduct and prosecutions of police officers who are charged with some of the most serious rights abuses (e.g., extrajudicial killings of alleged drug dealers and users) during the 2003 drug war have not been completed indicates a lack of political willingness to bring the perpetrators of the abuses to account. The Thai government should urgently ensure the accountability for police abuses and provide greater police oversight to prevent further abuse.
Second, given the observed lack of knowledge and access to legal services among some IDU in Bangkok, greater efforts should also be made to provide legal services that are accessible to IDU in this setting. A recent review\textsuperscript{165} indicates that legal services not only help victims of police abuse obtain redress and compensation, but they also have the potential to prevent police abuse in a number of ways: documenting rights abuses over time and effectively serving as an independent monitoring body of police actions; training IDU to know and assert their rights; and convening workshops for the police and prosecutors about the legality of health services for IDU. These types of legal interventions could likely serve to reduce the harm among IDU in Bangkok.

Third, the findings from this dissertation call into question the justifiability of the ongoing repressive drug policing efforts to address illicit drug use in Thailand and point to the need for alternative measures to respect the right to health of IDU. Given the finding suggesting that illegal drug markets continue to flourish in the country, it is important to address the treatment and care needs of those who continue to engage in drug use. Each year, Thai authorities set numerical targets for drug treatment enrolment. Although it stipulates that people who use drugs should be first and foremost encouraged to seek voluntary drug treatment, enrolment in compulsory drug detention centres and drug treatment in correctional facilities are counted towards fulfilment of the policy goal.\textsuperscript{44} Consistent with the recent joint statement and recommendations by the twelve UN entities,\textsuperscript{29} the Thai government should abolish the compulsory drug detention system and instead scale up the provision of voluntary, scientifically sound, long-term drug treatment in community settings.

Repressive and harmful drug policing is largely attributable to harsh application of criminal penalties to a wide range of drug offenses. Therefore, as
discussed in Chapter 2, decriminalization of personal drug use may be worth exploring in Thailand. It would not only reduce harms associated with incarceration and pre-trial detention of IDU, but could also facilitate access to voluntary drug treatment among IDU.\textsuperscript{177} Such legal change should accompany improvements in drug policing. Currently, there is no official commitment from the police to support harm reduction services for IDU and no systematic training of police officers to understand harm reduction services in Thailand, according to a harm reduction service provider in Bangkok (Tanguay P, oral communication, May 2013). These systems should be implemented as a matter of urgency alongside of greater police oversight and efforts to ensure full accountability for police abuses.

Lastly, ethical guidelines for the use of urine drug testing by police need to be established. The findings of this dissertation highlight that the police aggressively employ drug testing to IDU in Bangkok, often without respecting the dignity of the persons tested, and this practice is associated with various indicators of drug-related harm, including avoidance of healthcare and syringe sharing. First of all, the justifiability of forcible drug testing by police, in its current form, is highly questionable on a number of grounds. Urinalysis carries risk of false positives and cannot identify those who pose immediate threats to public security. Furthermore, as this dissertation indicates, consequences of testing involve numerous harms. As noted in Chapter 3, discussion to inform the development of humane and pragmatic guidelines for drug testing by police is urgently needed. Reports from Europe highlight that the police are ordered to respect the voluntariness and privacy of those tested when conducting roadside drug testing to vehicle drivers.\textsuperscript{197,198} These experiences provide some useful reference for developing guidelines in Bangkok. Given the significant implications of this policing tool for human rights and public health, a thorough discussion about the police’s use of drug testing should also be
held at the international level, including in the UNODC, which is charged with providing technical assistance to governments to help ensure that drug control efforts reflect human rights norms and public health goals.\textsuperscript{91,180}

8.6 Future Research

The studies presented herein provide a body of evidence on the negative associations between repressive drug policing and the health of IDU in Bangkok. While they suggest new directions for drug policy, more research is needed to strengthen the evidence-informed, human rights-based recommendations for drug policy.

First, some methodological limitations of this research need to be addressed. As the study sample was restricted to IDU in Bangkok, future research should examine experiences of IDU outside of Bangkok. In addition, the median age of the study samples (37-38 years) indicates that experiences of younger IDU may have been underrepresented in this dissertation. For example, while some female respondents reported instances of sexual harassment and violence by police, these episodes took place long before the study was conducted (typically more than ten years ago when the respondents were teenagers or in their early 20s). Therefore, future research should explore experiences of young drug users and conduct a gender-based analysis focused on these issues. Such research may involve other drug-using populations. For example, previous reports indicate that non-IDU drug-using populations comprise more adolescents\textsuperscript{68} and women of child-bearing age\textsuperscript{249} than IDU populations do. Therefore, health and human rights implications of drug policing may extend beyond those observed in this dissertation (e.g., implications for prenatal care and education).

Second, this dissertation focused on experiences of IDU, and thus did not explore the views and experiences of police officers, affected families, or local
residents. Previous studies suggest that efforts to identify the ways in which police undermine harm reduction programs help inform the development of effective policy and programming to reduce drug-related harm. According to previous studies, efforts to identify the ways in which police undermine harm reduction programs help inform the development of effective policy and programming to reduce drug-related harm. Accordingly, future research should involve police officers who enforce the drug laws. Likewise, there is little literature that examines the impacts of drug policing on families of people who use drugs or local residents who are involved in drug control efforts in Thailand. Exploring experiences of these broader stakeholders of drug policing will be useful for identifying opportunities and challenges to reforming the drug policy.

Third, public health advocates may benefit from research that seeks to identify barriers to translating research evidence regarding the negative impacts of the drug prohibition approach into policy and programming in Thailand. For example, while many studies have shown elevated risks of HIV and HCV infection in Thai prisons and have called for NSPs to prevent these infectious diseases in prisons, such services remain non-existent. Likewise, past investigations have identified significant harms and human rights violations pertaining to the compulsory drug detention system in Thailand. However, the system continues to proliferate. Experiences of other countries that have initiated a shift from prohibitionist drug policies that rely solely on repressive drug policing to more balanced approaches that address health and social harms of illicit drug use serve as useful references. Analyses of the political landscape in Thailand based on these experiences may be useful for effectively translating the findings and recommendations of this dissertation into policy and programming, as well as identifying needs for future research.

8.7 Conclusion

Over the past several decades, there has been a significant recognition among diverse groups of scientists, public health and human rights advocates, and policy
makers that drug prohibition approaches have failed to meet the objectives and have likely produced an array of unintended negative consequences, including violence in illegal drug markets, stigma and discrimination against people who use drugs, and epidemics of infectious diseases among IDU.\textsuperscript{6,10,252} Although a number of studies from many countries have identified adverse impacts of aggressive policing practices on the health of IDU, few studies have been undertaken in Southeast Asia, where punitive drug laws and the operation of a compulsory drug detention system may uniquely shape the social and structural environment surrounding illicit drug use. This dissertation makes a significant contribution in this area by investigating the relationship between drug policing and the health of IDU in Bangkok, Thailand. The study findings strongly suggest that policing practices have involved numerous human rights abuses, have increased the vulnerability of IDU to poor health, and yet have not reduced the supply of illicit drugs in Bangkok. In particular, they suggest that police use excessive force to coerce confessions from IDU and aggressively employ urine testing to identify drug offenders. These practices are likely fostering risky injection behaviour and reluctance to seeking healthcare among IDU. An analysis in this dissertation found that despite these aggressive drug suppression efforts, street-level availability of illicit drugs increased significantly between 2009 and 2011, indicating that illegal drug markets continue to flourish in this setting. The findings raise serious concerns about the drug policing practices and point to the need for providing greater police oversight and ensuring full accountability for police abuses, as well as a shift toward more balanced approaches to drug control in this setting.
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