UNIVERSITY OF CALIFORNIA, SAN DIEGO
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The impact of involuntary drug treatment on overdose, subsequent drug use and drug use treatment-seeking among people who inject drugs in Tijuana, Mexico

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor in Philosophy

in

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by

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PUBLICATIONS

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ABSTRACT OF THE DISSERTATION

The impact of involuntary drug treatment on overdose, subsequent drug use and drug use treatment-seeking among people who inject drugs in Tijuana, Mexico

by

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Background: The treatment of substance use disorders, as any other form of medical care, is a human right and must comply with quality standards of health care, including the right to refuse use of services. Involuntary drug treatment has been reported ineffective in decreasing drug use but its effects on health and subsequent treatment-seeking have not been longitudinally assessed.

Aims: (1) To examine the dynamics of involuntary drug treatment from the perspectives of people who inject drugs (PWID); (2) to assess the effect of involuntary drug treatment on non-fatal overdose; and (3) to determine whether past experiences of involuntary drug treatment influence subsequent voluntary treatment-seeking behavior in Tijuana, Baja California, Mexico.

Methods: PWID who were at least 18-years old and reported injecting drugs in the prior month were enrolled in a prospective study. Participants completed interviewer-administered surveys at baseline and every six months (2011-2017). For Chapters 2 and 4, a subsample of PWID reporting involuntary drug treatment in the context of a federally-funded policing program was interviewed and thematic analysis was performed. In Chapter 3, generalized estimating equation analyses were conducted on recent (i.e., past 6 months) non-fatal overdose event and its relationship to involuntary drug treatment. In Chapter 4, Cox regression was also conducted to identify factors related to voluntary drug treatment subsequent to involuntary drug treatment experience among those with no prior drug treatment history.

Results: In Chapter 2, 25 PWID described punitive characteristics of a local policing program and lack of State oversight and healthcare at drug centers. In Chapter 3, among 670 PWID, 31.5% reported a recent non-fatal overdose, which was independently associated with recent involuntary drug treatment. In Chapter 4, among 359 PWID, a possible pathway through which involuntary drug treatment limits future treatment-seeking was identified through mistreatment, stigmatization and discrimination at drug centers.

Conclusions: Findings highlight the use of involuntary treatment as a mechanism of control that may have life-threatening risks as well as a complexity of factors that drive drug treatment-seeking among PWID in Tijuana. Policy implications include the need to protect PWIDs' right to choose the circumstances of treatment, for adequate professionalization and training of drug treatment staff, and for treatment centers' oversight.

CHAPTER 1: INTRODUCTION

OVERVIEW

The effectiveness of involuntary drug treatment has been an important public health topic, usually studied cross-sectionally and mainly in relation to court-mandated treatment in high-income countries. Little is known about different, but arguably more frequent modalities including family requested drug treatment or the extra-judicial detention of people who use drugs in non-evidence based drug centers. In this dissertation, I aim (1) to address how the State disciplines people who inject drugs (PWID) by arbitrary detention and retention at drug centers, (2) to longitudinally assess the association between involuntary drug treatment on one of the most important health outcomes, non-fatal overdose, and (3) to determine the predictors of voluntary treatment-seeking and whether a prior involuntary drug treatment experience affects such behavior, focusing on a Mexican population of PWID.

This dissertation includes three research articles in addition to this Introduction (Chapter 1) and Discussion (Chapter 5). Chapters 2, 3 and 4 report original research studies based on the primary dissertation study aims. The first paper (Chapter 2), entitled *"'Somebody is gonna get hurt': Accountability and human rights concerns associated with involuntary drug treatment program among people who inject drugs in a Northern Mexican Border City"*, provides a thematic qualitative analysis of the experience of involuntary drug treatment among PWID through the lens of disciplinary power and structural violence. Chapter 3, *"Increased non-fatal overdose risk associated with involuntary drug treatment in a longitudinal study with people who inject drugs"* highlights the life-threatening risks

PWID experience and the association with involuntary drug treatment, focusing on non-fatal overdose events. The third study (Chapter 4), *"Voluntary drug treatment enrollment after subsequent involuntary drug treatment experiences among people who inject drugs in Tijuana, Mexico: A mixed methods approach"* examines the associations between voluntary treatment-seeking and past experiences of involuntary drug treatment, testing the hypothesis that involuntary drug treatment decreases the incidence of subsequent treatment-seeking. Chapter 5 presents an overall summary of the three research articles, provides direction for future research and draws policy implications for Mexico and internationally.

To meet these aims, I performed an inductive thematic analysis of the data drawn from 25 interviews (Aim 1), applied generalized estimating equation analysis techniques to longitudinal data on the outcome of non-fatal overdose to define its association with involuntary drug treatment (Aim 2), and applied mixed-methods analysis, specifically time-dependent Cox regression models and thematic analysis to determine the predictors of voluntary treatment-seeking, including prior involuntary drug treatment (Aim 3). This dissertation offers contributions to the body of research on human rights approaches to public policies related to addiction treatment, with respect to public security and health entities in Mexico.

BACKGROUND

Evidence-based addiction treatment

As a form of medical care, drug treatment must comply with established standards of quality health care.[1,2] That is, access to medically appropriate drug treatment should

be tailored to the person's individual needs, which includes the right to refuse treatment.[1] When treatment is not needed, refused or unavailable, strategies that aim to reduce negative health, social and economic consequences associated with drug use are needed; such strategies are referred to as harm reduction.[3,4] Harm reduction approaches promote a commitment to public health and human rights[4] and have been internationally acknowledged as a crucial form of HIV and other blood borne infections prevention among PWID.[5] Harm reduction strategies among PWID include needle exchange programs, opioid substitution treatment (e.g., methadone and buprenorphine maintenance), and distribution of opioid antagonist (i.e., naloxone) to people who use drugs to help reduce overdose-related deaths.

Involuntary drug treatment

As with other medical treatments, such as directly-observed therapy for tuberculosis, there is controversy regarding the appropriateness of involuntary drug treatment. On one hand, there are divergent opinions that consider involuntary drug treatment as a last resort for public health well-being.[6] On the other hand, opponents point out that involuntary drug treatment may also be forced upon patients without it being the last option, which is considered a violation of patients' human rights.[7] A substantial body of literature shows that involuntary drug treatment is not cost-effective,[8-11] does not benefit the user or the society[12,13] and is contrary to international human rights agreements and ethical medical standards.[12,14]

Globally, substance use disorders are rarely an entry criterion for involuntary drug treatment, and people who use drugs are often forced to comply with non-evidence-based

interventions with no medically assisted detoxification or supervision by health personnel.[15,16] Such non-evidence-based interventions include physically restraining people in centers than are similar to prison settings.[17] To coerce people into abstinence disregards the chronic nature of substance use disorders as well as the scientific evidence of the ineffectiveness of punitive measures.[12] Long-term involuntary drug treatment is considered by the United Nations Office of Drug and Crime (UNODC) to be a type of low security imprisonment,[18] and as such the agency recommends that it should only be used as a last resort in emergency situations and must be as ethical as voluntary treatment.[9,18] Once the immediate emergency has been resolved (e.g., opioid overdose or drug-induced psychosis), involuntary drug treatment should be discontinued.[9] The process must involve health professionals, a treatment plan, and be consistent with evidence-based interventions.[18]

Involuntary drug treatment and risk of overdose

An important negative consequence of involuntary drug treatment may be an increased risk for overdose. Overdose is generally defined as the ingestion of more substance than the organism can metabolize, which may be related to changes of drug purity and loss of tolerance. There can be fatal (i.e., death) and non-fatal outcomes. In this study, I focus on non-fatal outcomes because the official death certificates may not include overdose as the cause of death. In cross-sectional studies, release from an enclosed setting, such as incarceration,[19,20] and hospitalization[21] has been associated with an increased risk of overdose when the person returns to the environment that triggers drug use, a concept known as *cue reactivity*.[22] In addition, periods of abstinence

have been associated with an increased risk for fatal opioid overdose,[23] which may be related to a loss of tolerance. It yet remains unknown whether there are more overdose experiences after involuntary drug treatment among PWID. The aim of Chapter 3 is to elucidate the relationship between involuntary drug treatment and subsequent overdose.

Drug treatment regulations in Mexico

In Mexico, as in South East Asian countries, with public compulsory drug detention centers such as Malaysia, Vietnam, Cambodia, and China,[24] progress in the shift towards voluntary treatment facilities is hampered by a lack of skilled human and financial resources, infrastructure, stigmatization of drug users and tensions between abstinence and harm reduction approaches.[25] In 2009, in an effort to regulate treatment centers, the Mexican government passed a law on prevention, treatment and control of addictions (known as NOM-028).[26] This law stipulated the types of interventions considered as drug treatment and the basic characteristics for the certification of treatment centers. NOM-028 distinguishes 3 types of rehabilitation treatment: professional (i.e., medically based), mixed-model (i.e., professional treatment with 12-steps model; Appendix A) and mutual aid (i.e., 12-step based). Voluntary treatment can be sought in any of the treatment modes. Involuntary drug treatment, however, may only be provided at professional or mixed-model facilities, where a physician is required to direct the treatment plan. Involuntary drug treatment can be requested by a family member or can be legally mandated. In both cases, a district attorney has to be notified within 24 hours after the admission.[26] NOM-028 also stipulated that rehabilitation centers must be certified by the National Commission Against Addictions (*Comisión Nacional Contra las Adicciones*;

CONADIC), which requires provision of adequate living conditions, food, treatment plans, adequate human resources and infrastructure (Appendix B).

Drug treatment centers in Mexico

Treatment for substance use disorders has been included in *Seguro Popular*, Mexico's universal health care system for those with no other health insurance nationwide (i.e., underserved and poor population),[27] since 2011.[28] However, most of the population is treated at centers not run by the government, due to lack of infrastructure and human resources.[29] There is no official number of drug rehabilitation centers in Mexico; federal, state and municipal entities report different numbers.[25] According to Mexico's national census on specialized treatment centers, in 2013 there were 2,043 residential treatment centers (98% private),[25,30] of which 87% are mutual aid and use the 12-step model of Alcoholics Anonymous.[30] Most treatment centers remain unregistered with the CONADIC;[30] in 2003 it was estimated that approximately 38,000 drug users were being treated in unregistered residential centers.[25] Registration with CONADIC requires proof of permits and treatment plans; the process varies by state. Cross-sectional studies have suggested that mental and physical health of drug users in these centers rapidly deteriorates, especially considering that approximately 75% of those in non-professional residential treatment centers have a comorbid psychiatric disorder (mainly ADHD, anxiety and impulsive disorders).[29]

In Mexico, rehabilitation centers run by non-State actors generally operate outside of public or government oversight[31]; they are nationally known as "annexes". Annexes have been previously described in anthropological research as hybrid institutions

composed of a 12-step approach, mental asylum, prison and church.[28] Such centers are most commonly used by the poorest population in urban areas affected by drug-related violence, and they utilize violence as treatment for drug dependence.[28] These centers run with minimal cost to families and in places where local governments do not provide enough treatment options.[31] Several treatment centers that have derived from the mutual aid model have been exposed as both physically and verbally abusive towards their clients.[25] People that have been in these centers have reported being chained, kicked, beaten, locked-up, handcuffed, used as forced labor, suffered verbal abuse, and restricted family visitations; they have reported being raped and starved; sometimes they do not know how long they will be detained at the center and can be forced to live in these conditions for over a year; suicides have been known to occur.[25,32-34]

Detentions and inhumane practices and treatments such as the ones experienced in some of these facilities violate human rights according to UNODC,[8] which has called for the closing of these centers.[35] The fear of being mistreated or abused has driven users into hiding and moved them even farther from potentially life-saving health services.[36] As a consequence, human rights abuses suffered by PWID go unreported because of fears of reprisal and the stigmatization they have suffered,[14,37] which are yet another manifestation of the marginalization of PWID in society.[33,38]

Drug treatment centers in Baja California and Tijuana

In the state of Baja California, there were approximately 6,984 people in residential drug treatment in 2011,[39] of whom 57.4% sought treatment voluntarily, 40.5% were taken by friends or relatives (coerced but not legally forced) and the rest (2.1%) were legally

mandated.[40,41] The latter is likely to be related to the 2008 law reforms to the Federal General Health Law (also known as *Narcomenudeo* laws).[42] These reforms, which are independent from the NOM-028, mandate that people who use drugs will be sent to drug treatment by a district attorney if found in possession of a small quantity of drugs[1] on three or more occassions.[42] Between 2009 and 2012, 5,302 people were mandated to treatment under this law, making Baja California the Mexican state with the highest proportion of legally mandated (68% of the national total) and completed treatment.[43]

In Tijuana, there is also evidence of involuntary drug treatment requested by the police and not by the district attorney; this is especially concerning given that the district attorney is the only one responsible to legally mandate treatment.[25] Previous research have found that although voluntarily admission is common in Tijuana, people who use drugs report having been forced to remain in the rehabilitation centers against their will.[25] This generates a complex situation in which users may be afraid of being treated poorly and do not seek treatment again.[25]

Forced mobility of PWID in Tijuana

Between December of 2014 and March of 2015, there was a security and policing intensification program in the Tijuana River canal, a zone widely reported as a hot spot where PWID and other stigmatized populations lived.[44,45] The municipal government reported that this federally-funded policing program, *Tijuana Mejora*, had two major goals: the revitalization of the canal and the relocation of homeless people to their states of

[1] Heroin 50 mg, cocaine 500 mg, methamphetamine 40mg.

origin or admission into rehabilitation centers. The program resulted in the displacement of the approximately 800-1000[46] people from the canal, most of whom were reportedly sent to centers.[47]

Government actions like *Tijuana Mejora* have been reported in other Latin American cities in which there are populations of people who use drugs that tend to be the target of structural violence and social cleansing[48] such as the attack on *Crackolandias* in Sao Paolo, Brazil [49] or the Bronx in Bogota, Colombia.[50] When involuntary drug treatment is funded by the government, rehabilitation centers may be more determined to fill treatment quotas than to address drug related problems; especially when success is measured by number of admissions.[36] With these actions, PWID may engage more frequently with justice officials than health officials.[51] Through scientific assessment of the impact involuntary drug treatment has on PWID's health and behaviors, this research provides data to inform Mexican and international entities of harm reduction and human rights approach to improve health services for PWID.

Study Setting

This dissertation research was conducted in Tijuana, Baja California, Mexico for several reasons: (1) Mexico, like the United States, is one of the countries in which people can be legally mandated into drug treatment;[26] (2) therapeutic communities with mutual aid techniques (i.e., based on the 12-step model of Alcoholic Anonymous, led by people who have recovered from substance use dependence, not evidence-based) have been culturally accepted as the best available treatment option, which compensates for the scarcity of public treatment centers;[17] (3) Baja California may be the Mexican state with

the highest proportion of forced treatment;[43] (4) Tijuana a the city with one of the highest rates of drug use in Mexico and arguably, the city with the highest prevalence of injection drug use nationwide, (5) from December 2014 to March 2015 more than one thousand homeless people that were settled in the Tijuana River canal were evicted as part of a national security measure, which included forcibly taking approximately 1000 drug users to rehabilitation centers,[45,52-54] and (6) on-going cohort study among PWID in Tijuana, Baja California, Mexico was available.[55,56] By nesting this dissertation within *El Cuete* IV I overcome the challenges associated with the study of hidden populations, such as PWID, I made use of existing research infrastructure (e.g., recruitment and space); and a high volume parent study sample made it easier to find people with involuntary drug treatment experiences.

CONCEPTUAL FRAMEWORK

The conceptual framework for this dissertation (Figure 1.1) draws upon two main theoretical frameworks to conceptualize involuntary drug treatment and its effects on PWID: disciplinary power and structural violence.

Disciplinary power is defined as “a mechanism of power that extracts time and labor from bodies, and it is exercised through constant surveillance”.[57] People who use drugs and drug use treatment have been previously studied using the concept of biopower.[58] Biopower is a mechanism of power exercised through the control over human life, by the administration, optimization and multiplication of it, subjecting controls and regulations.[59,60] Disciplinary power is a mechanism of power that was typical of premodern (i.e., pre-capitalism) societies, whereas biopower is a modern mechanism

characterized by the control of individuals through universalizing processes such as registration and vital statistics. However, presumably, there is a high risk of a premodern exercise of power inflicted on PWID in Tijuana. The premodern exercise of power is usually inflicted on populations that live on the margins of the community;[61] and PWID are one of such groups since they are not included in the census and their vital statistics are neither controlled nor registered.

I address the overall context in which PWID live in Tijuana through the analytic lens of structural violence. The study of structural violence describes "the social structures characterized by poverty and steep grades of social inequality […] Structural violence is violence exerted systematically—that is, indirectly— by everyone who belongs to a certain social order… Structural violence informs the study of the social machinery of oppression. Oppression is a result of many conditions, not the least of which reside in consciousness".[62] Structural violence is embodied as adverse events — death, injury, illness, subjugation, stigmatization, and even psychological terror— if what we study, is the experience of people who live in poverty".[62]

Studying the application of disciplinary power as a form of structural violence is a pertinent conceptual framework for this dissertation because it shifts from victim blaming to an institutionalized sociopolitical and economic responsibility for harm[63,64] and it focuses on the environmental factors that impede people who use drugs from engaging with health services. In addition, it emphasizes the importance of human rights and wider determinants of disease vulnerability. Drug treatment policies currently set in Mexico imply that medical treatment is accessed by people with more financial and social resources, whereas mutual-aid non-regulated treatment is accessed by people of lower

income status. Poor people are more likely to fall sick, be denied access to care, and to be the victims of human rights abuses.[65] For example, the people that used to live in the Tijuana river canal have historically suffered from structural violence; this population was characterized by a high proportion of deportees from the United States, low level of education, and lack of options of formal employment.[46]

AIMS AND HYPOTHESES

This dissertation has the following aims and corresponding hypotheses:

Aim 1: To analyze Tijuana's PWID's experiences with involuntary drug treatment including the dynamics related to entering into involuntary drug treatment, daily-life conditions while in drug rehabilitation centers, and the conditions of discharge and relapse in injection drug use in the context of a federally-funded initiative.

Aim 2: To quantitatively analyze differences in non-fatal overdose drug use before and after involuntarily drug treatment among PWID. *Hypothesis 2.1*: Overdose significantly increases after involuntary drug treatment, compared to overdose incidence before involuntary drug treatment.

Aim 3: To determine predictors of voluntary drug treatment-seeking among PWID and the specific impact involuntary drug treatment experiences have on subsequent drug treatment-seeking behavior. *Hypothesis 3.1*: Any voluntary drug treatment event will be significantly lower among people who have experienced involuntary drug treatment, compared to those with no involuntary drug treatment experience.

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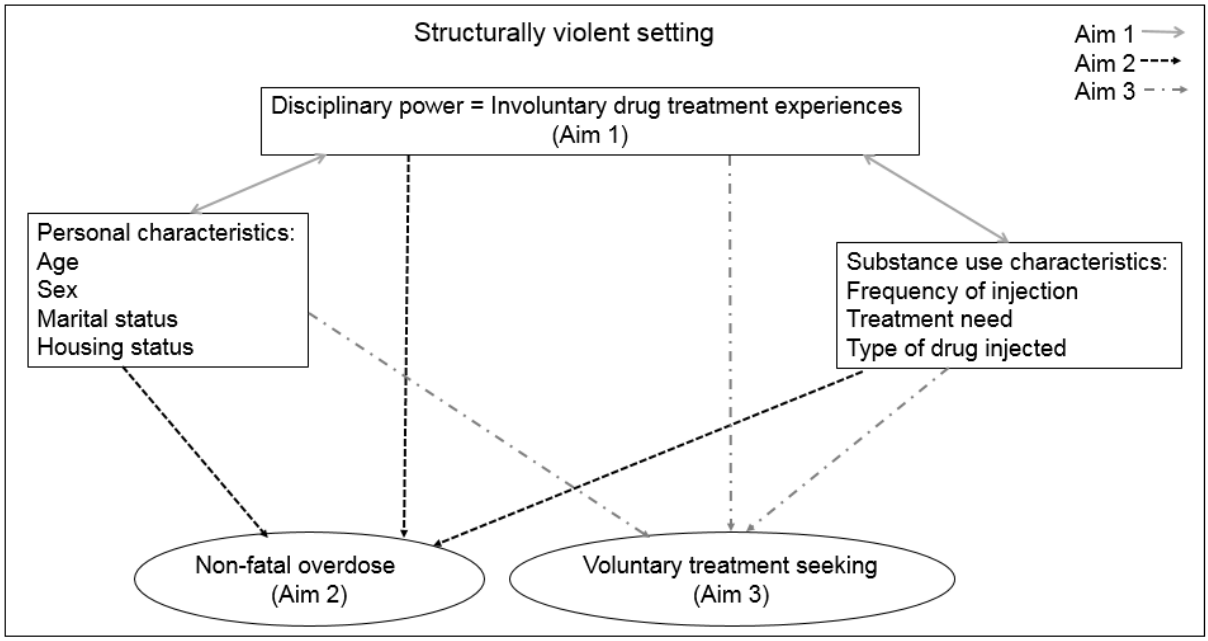

Figure 1.1 Conceptual framework of involuntary drug treatment and its impact on non-fatal overdose and voluntary treatment-seeking behavior.

CHAPTER 2: "SOMEBODY IS GONNA GET HURT": ACCOUNTABILITY AND HUMAN RIGHTS CONCERNS ASSOCIATED WITH INVOLUNTARY DRUG TREATMENT AMONG PEOPLE WHO INJECT DRUGS IN A NORTHERN MEXICAN BORDER CITY

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ABSTRACT

The treatment for substance use disorders, as with any other form of medical care, must comply with quality standards of health care. People with substance use problems also have the right to refuse treatment. Involuntary drug treatment, with some exceptions, has been shown ineffective in decreasing drug use yet it is a common practice in high, middle and low income countries. In Mexico, there are not enough professional residential drug treatment programs and voluntary and involuntary treatment is often provided by non-evidence based, non-professional programs. We studied the experiences of people who inject drugs (PWID) in Tijuana who were taken involuntarily to drug centers under

the auspices of a federally-funded *Operativo* (official police operation) from 2015-2016. We applied the concepts of disciplinary power and structural violence in the thematic analysis. Saturation was reached after twenty-five interviews. The main themes that emerged were: (1) uncertainty and fear about the degree of extrajudicial violence the police would resort to as the *Operativo* intensified; (2) discretionary selection of people taken to drug centers; (3) discrimination and violence at drug centers; (4) lack of State oversight of the drug centers and (5) perceived ineffectiveness of the *Operativo* at producing sustained drug use cessation in the experience of those interviewed. Future studies should evaluate the effect involuntary treatment has on subsequent voluntary treatment-seeking and negative mental and physical health outcomes, including overdose.

KEYWORDS: Involuntary drug treatment; people who inject drugs; Tijuana; human rights; disciplinary power.

INTRODUCTION

Medical treatment against the patient's consent is only accepted within the biomedical field under rare circumstances[1] for cases where patients are unable to provide consent and where there is a clear case that withholding treatment would cause the patient or others greater harm. Likewise, treatment for drug dependence must involve the patient's consent to be ethical, although some countries do allow involuntary drug treatment as part of criminal justice diversion or other programs including the United States,[2] Russia,[3] Brazil,[4] Peru[5] and Thailand.[6] In such cases, medical involuntary

treatment is considered a valid 'last resort' response to prevent greater harm.[7] However, evidence suggests that drug treatment may also be mandated without it being the last resort, which is a clear violation of patients' human rights,[8,9] and is contrary to international human rights agreements and ethical medical standards.[10,11] In addition, in countries such as Malaysia, China, Vietnam, Cambodia[12] and Mexico[13] involuntary drug treatment is legal; however, these countries lack skilled human and financial drug treatment resources and infrastructure for inpatient care. As such, drug users are often forced to comply with non-evidence-based interventions. Evidence based treatments include cognitive behavioral therapy for cannabis and cocaine dependence,[14] brief interventions for binge drinking[15] and medicalized treatment, such as methadone or buprenorphine maintenance for opioid dependence.[16]

In Mexico, whether it is voluntary or involuntary, most of the drug user population that receive residential care, are "treated" at centers that are not operated by the government[17] due to lack of infrastructure and human resources.[18] According to Mexico's national census on specialized treatment centers, in 2013, there were 2,043 residential drug centers,* of which 98% are privately run.[13,17] Of these programs 87% are referred to as "mutual aid" and use the 12-step model of Alcoholics Anonymous (AA).[17] Drug centers run by non-State actors generally operate outside of public oversight;[19] in 2017 there were only 224 certified centers.[20] Some of these centers, known as annexes, began as shelters built next to (annexed to) a mutual help organization meeting place for homeless people.[21] Annexes have been previously described as hybrid institutions composed of a 12-step

* We chose to call them drug centers rather than drug treatment centers because they do not provide evidence-based treatment.

approach, mental asylum, prison and church.[22] Such centers are most commonly used by the poor in urban areas affected by drug-related violence and some utilize violence as treatment for drug dependence.[22] These centers run with minimal or no cost to families and in places where local governments do not provide enough treatment options.[19,21]

Several annexes in Mexico have been exposed as being both physically and verbally abusive towards their clients.[13] In response, in 2009 the Mexican government made an effort to regulate treatment centers by modifying the Law on Prevention, Treatment, and Control of Addictions (known as NOM-028).[23] This law stipulated basic characteristics for the certification of treatment centers recognizing three types of rehabilitation treatment centers: professional (medically based), mixed-model (professional treatment with 12-steps model) and mutual aid (12-step based). While voluntary treatment can be sought in any of the treatment modes, involuntary treatment may only be provided at professional or mixed-model facilities where a physician is required to oversee the treatment plan. Involuntary drug treatment can be requested by a family member or can be legally mandated. In both cases, a district attorney has to be notified within 24 hours after admission.[23] NOM-028 also stipulated that rehabilitation centers must be certified by the National Commission Against Addictions (*Comisión Nacional Contra las Adicciones*; CONADIC); which requires provision of adequate living conditions, food, treatment plans, adequate human resources, and infrastructure.

Because of its geopolitical and social context, Tijuana, Baja California, Mexico is currently a city with one of the highest rates of drug use in Mexico and arguably, the city with the highest prevalence of injection drug use nationwide. Tijuana is located immediately adjacent to and contiguous with the city of San Diego, California. It is the 5th

largest city in Mexico and the largest city in the U.S.-Mexico border region[24] with a 2010 census population of 1,559,683 people.[25] Tijuana experiences demographic pressure as a consequence of the migration to and from the United States and Central America and internal migration from other parts of Mexico. For example, from 2007 to 2016, Tijuana received 25.3% of the 3,955,263 deportees from United States.[26]

Tijuana is also situated on a major drug trafficking route that has historically suffered from violence, which intensified in 2008 when rival cartels were fighting for domination of the area.[27,28] Tijuana's casinos, bars, and commercial sex work industry has long attracted persons from the U.S.[29,30] In an effort to "clean up" Tijuana's image and increase security, between December 2014 and March 2015, a federally-funded policing program, *Operativo Tijuana Mejora*, was implemented in the canal of the Tijuana River, a zone widely known as a hot spot where people who inject drugs (PWID) and other stigmatized populations were living.[31] It was estimated that, at any one time point, there were between 700 and 1000 people living in the canal, mostly men who had lived there for more than one year, and most of whom were active drug users.[31] This program was unprecedented in terms of coordination between federal and local law enforcement agencies. The explicit goals of *Tijuana Mejora* were to: (1) "revitalize" the canal and (2) the relocation of homeless people to their states of origin or admission into rehabilitation centers. *Tijuana Mejora* resulted in the displacement of approximately 800-1000 people who were reportedly involuntarily sent to treatment centers.[32-35] The aim of this study was to examine the dynamics of involuntary drug treatment, including entering into the treatment centers, the daily-life conditions there, discharge from the center, and relapse

in injection drug use from the perspectives of PWID in Tijuana in the context of the above described federally-funded initiative.

THEORETICAL FRAMEWORK

We applied Foucault's concept of disciplinary power as our analytic lens. Disciplinary power is defined as "a mechanism of power that extracts time and labor from bodies, and it is exercised through constant surveillance".[36] People who use drugs and drug use treatment have been previously studied using the closely related concept of biopower.[37] However, we believe that there is a high risk of a premodern exercise of power inflicted on PWID in Tijuana. The premodern exercise of power is usually inflicted on populations that live on the margins of the community;[38] homeless PWID in Tijuana are not included in the census and as such, their vital statistics are neither controlled nor registered and hence, they live on the margins of the community. Additionally, we also address the context of structural violence and human rights violations inflicted towards the PWID in this border city. The study of structural violence describes "the social structures characterized by poverty and steep grades of social inequality… Structural violence is violence exerted systematically—that is, indirectly— by everyone who belongs to a certain social order… Structural violence informs the study of the social machinery of oppression. Oppression is a result of many conditions, not the least of which reside in consciousness".[39] Structural violence is embodied as adverse events — death, injury, illness, subjugation, stigmatization, and even psychological terror— if what we study, is the experience of people who live in poverty".[39]

METHODS

Participants were purposively selected from an existing prospective cohort study (*El Cuete* IV) with PWID in Tijuana. This parent study has collected bi-annual data from 735 PWID since 2011 and is designed to assess HIV risk behaviors, drug use and environmental context, as well as test participants for HIV.[40] Inclusion criteria for the parent study included being 18 years of age or older, having injected drugs in the past month, speaking English or Spanish, currently living in Tijuana with no plans to move, and not currently participating in an intervention study. The Human Research Protections Program of the University of California, San Diego and the Ethics Board at El Colegio de la Frontera Norte approved the study protocols.

For this paper, we interviewed participants who reported to *El Cuete* IV staff that they have been taken involuntarily to drug treatment during the period when the police *Operativo Tijuana Mejora* took place (i.e., from December 2014 to March 2015). Between December 2015 and April 2016, *El Cuete* IV participants who agreed to share their experiences with involuntary drug treatment were asked to participate in this study. Those who agreed were asked to provide verbal consent, which was tape recorded along with the interview. Participants gave oral consent after being informed about the confidentiality and anonymity of the interview and their rights as research participants. Interviews were recorded and transcribed verbatim for analysis; all files were kept in an encrypted computer and de-identified from the rest of the *El Cuete* IV data. At the end of the interview, participants received $20 USD as compensation.

Based on international reports and published research, we developed an interview guide specific to dynamics related to entering into involuntary treatment, daily-life

conditions while detained in these drug rehabilitation centers, and the conditions of discharge and potential relapse to drug use (Appendix C). We used an inductive approach to thematic analysis,[41] since data was collected specifically for the research and themes identified are strongly linked to the data themselves.[42] CR conducted all interviews as well as all transcription of audio recordings, which were then printed and read. After reading all the interviews once and initial coding was done, each interview was independently analyzed and the dynamics of power were evaluated. A second coding was done to identify codes across PWID responses and categorized according to commonalities in the themes. The analysis was performed in the language in which the interview had been conducted (either English or Spanish at the participant's preference). In addition, given the nature of the parent study, CR and PGZ informally talked to participants about past experiences and were able to follow the trajectories of most of them, in addition to the interviews. PGZ had daily contact with the participants as a physician and the field director of the parent study. CR conducted fieldwork approximately once a week for over two years before and after the interview period. PGZ also leads a voluntary wound clinic where CR volunteered for over a year. CR collected ethnographic field notes and memos that enriched the analysis by informing about aspects of the participants' lives subsequent to the interview.

RESULTS

We interviewed people who reported to the field staff that they had been taken involuntarily to drug treatment by the police during *Tijuana Mejora*. During the *Operativo* and by the time of the interview, 25 interviews were needed to reach saturation (15

women and 10 men), of whom 20 participants were involuntarily taken once, 4 participants twice, and one participant three times. The median age was 41 years (Interquartile range [IQR]: 36.7-46.5), the years since first injection was 18.5 (IQR: 13.7-25.5), and 31% (n=11) of the participants had been at least once in a drug center before the *Operativo*.

Following are 5 major themes that we identified related to the power dynamics and human rights violations PWID suffered during this event and up to the time of the interview. These themes are: (1) uncertainty and fear about the degree of extrajudicial violence the police would resort to as the *Operativo* intensified, (2) discretionary selection of people taken to treatment, (3) discrimination and violence at drug centers, (4) lack of State oversight at the treatment centers, and (5) treatment ineffectiveness.

1. Uncertainty and fear about the violence in the Operativo

The experience that PWID reported exposes the violent policing tactics that were used to regain control over the people living in the canal, including intimidation and threats, which have also previously reported.[43] Consequently, uncertainty was the predominant feeling they experienced from the moment the policing process began until they were taken into the drug centers. Because of this uncertainty and the violent context, there are accounts of people hurting themselves so they were not taken by the police. Reportedly, people bleeding or visibly hurt were not taken to the drug centers, they were just left without provision of health services.

When asked about what participants thought was going to happen to them when the police presence intensified, 4 different assumptions emerged: (1) they were being

taken to drug centers based on warnings given by insiders (some participants had contact with public officials that warned them about the eviction and drug centers), (2) they were being taken to a shelter to protect them from weather conditions, (3) they were going to "disappear" (i.e., referring to extrajudicial killings or incarceration), or (4) they were being taken to the police station and detained for a couple of days.

1.1 Belief that there were being taken to drug treatment centers. Some participants had received warnings about the *Operativo* prior to its commencement. Two of them had contacts at the police station and were told to watch out for the *Operativo* because people were going to be evicted from the canal and taken into drug centers. These contacts were based on sex trade and corruption. Other participants were warned by people working at the municipal social services. Participant contact with social services officers was as a result of participants being part of the usual clientele who received the sporadically available HIV prevention kits (i.e., mostly condoms and occasionally syringes) in exchange for information on the drug user population. Given that this *Operativo* was unprecedented in terms of coordination between federal and local law enforcement agencies, even these participants that were warned did not think they were at risk of permanent eviction and involuntary drug treatment.

1.2 Belief that there were being taken to shelters. Because the *Operativo* took place during the peak of the rainy season, hundreds of people living in the canal were preparing their tents and *ñongos* (i.e., areas with cardboard and fabric in which people lived) so they could be able to stay warm. When police came into the canal, participants thought that, as in previous occasions, they were taking preventive measures and taking them into shelters to prevent accidents and deaths. Overall, participants reported there

were so many police officers that no one could have escaped. Once again, the force of the State was made visible in terms of number of police officers present.

1.3 Belief that there were being 'disappeared'. People who were taken after the first weekend the *Operativo* began, especially those who were taken at night, thought that the police officers were going to make them "disappear". People disappearing in the context in which PWID live translates into never going back to the place they were taken from and possibly being killed or permanently incarcerated. PWID in Tijuana, although they are visible –and perceived as a nuisance- for the rest of the community, do not officially exist. That is, they are not counted by the census and consequently, invisible and even 'expendable population',[44] giving them a sense of invisibility in which violence and disappearances can occur without having a backlash from the general society. Although there are historical accounts of disappearance in Latin America (e.g., undocumented migrants or dissidents), they tend to be politicized. In this case, PWID in Tijuana play a different role. They are part of the marginal mass that is a permanent structural feature of contemporary societies.[45]

1.4 Belief that they were being arrested. Most of the people living in the canal were frequently arrested and detained for hours or days by the police. As such, some participants reported that when they were being chased by the police, they thought they were going to spend a couple of days at the police station as they usually did. Compared to other times that participants have been taken by the police, this time almost no one was taken to the police station where usually a judge decides how many hours they will spend at the detention center.

The usual protocol that PWID reported living prior to the *Operativo* was to be stopped and arrested, taken to the judge, and be sent to a cell for up to 72 hours. In this case, some participants reported to have been taken directly from the canal to the treatment centers by the centers' vans and public transportation; others that were taken from areas other than the canal were taken to the canal on police cars and then also put into the vans and buses.

> I was aware there was something going on and that they [police] could take us to a center, but [only] when we are in a very poor condition because of the drug use, right? ... It is not legal… Police do whatever they want, they've always done it. One [does not complain] because [we are] addicts and because we don't say anything, one doesn't know where to go to defend oneself. That is why police are picking on one. (Man, 52).

The experience of violence was enhanced by the time spent between detentions and getting to the centers. Since officers were waiting for backup and the centers' vans to arrive, people were detained for several hours in which they had to assume they would not be able to escape. A man asked for some evidence of the *Operativo's* legality:

> … You say the government is sending us [to treatment], well, where is the document that says so? 'We will take you to a center and so and so, so you quit drugs.' The way they [police] take people, how they beat us up… based on what do you [police] get here taking people and all that? What gives you the right? Who says so? Which document? (Man, 44).

Some of the policing actions described by respondents appeared to be about coercing an excluded population and normalizing their actions (an almost classic example of Rose's (Rose 2000) definition of the exercise of 'disciplinary power' as acting by the law but through the normalization and coercion of excluded population. However, what is particularly notable in this case is the ways in which participants described their attempts

to ‘de-normalize’ these actions by pointing out how they were in conflict with the law and with their human rights:

> -I am an adult, this is kidnapping… you cannot take me. –It is not whether you want to go or not, here it is that you are going now [to a drug center] (Woman, 29).

Several participants, but especially women reported to have been yelled insults at them (“*you are the trash of society!*”) and to have been told they had no rights (“*you live on the streets, you have no rights!*”). Physical violence included being beaten up mostly at the time of detention and when forced to get into the buses and centers’ vans.

After people started escaping from some of the drug centers, PWID began to be aware of the goal of the *Operativo*. Most of them thought that by dispersing into more isolated areas farther from downtown Tijuana, they were going to be safe. Some of them were, but others were taken from areas in which PWID presence was also widely seen, including downtown and farther areas of the canal.

2. *Discretionary selection of people taken to drug centers*

Although most participants reported being detained straight from the canal, others reported to have been walking by the Red Light District or even standing outside of their rooms in the surrounding neighborhoods. Those who were not detained at the canal, reported that they had been living in rented rooms at tenement houses or at hotels. That is, not all people taken during the police *Operativo* were living on the streets, but they also were taken based on their appearance. The discretionary characteristic of the process is also combined with internalized stigma, as expressed by this woman:

> Police only take tecatos [heroin users] and not alcoholics or cristalones [meth users] because tecatos give a bad appearance to the city... And it is also our

> fault, right? Because we're also to blame. Sometimes we fix on the street, you know? In the sidewalk, we sit down and get a fix, or we sleep on the streets, or there are others that are dirty, filthy, that shat and wet themselves. And well, the community doesn't like that, they want something different, that is why they're doing it [taking PWID to drug centers], they want to clean up… it is called Proyecto Limpiar Tijuana [Cleaning Tijuana Project][2], and that is what they're doing (Woman, 41).

Discretionary selection of people taken was also evident in that regardless of where the detention occurred, several participants reported not being in possession of drugs or drug paraphernalia. This process exposes the discriminatory basis in which people were taken from the streets as a way to control their presence and behavior. All the participants were actively injecting but they also commented on the detention of non-users based on their appearance. That is, non-users that looked like drug users may have also been detained and taken as part of the *Operativo*.

3. Discrimination and violence at drug centers

Bureaucratization of drug treatment services translates into stigmatization of drug users that seek care.[46] When this care is not voluntarily sought, expressions of violence at drug centers emerge. This violence originates fear among users, which stop them from speaking up.[47] Experiences at unregulated drug centers have been widely reported by people who use drugs as violent and stigmatizing.[46] We found presence of verbal and physical abuses that others had previously described.[46,47] However, we will not elaborate on them because they are not in the scope of this analysis. Instead, we focus this section on the specific discrimination and abuses suffered as direct consequence of having been

[2] The real name is *Tijuana Mejora*/ Improving Tijuana. This is the name that the community, including the police uses.

admitted as Government Request (*Petición Gobierno*). Government Request was the mode in which users were admitted in lieu of Relative Request (*Petición Familiar*) or Voluntary Admission (who were the least).

Repeatedly present in all interviews were narratives describing constant and pronounced discrimination against those who were subjected to treatment by Government Request. Although the drug centers are not part of the State, since they received public funding, they became agents of the State. In this sense, drug centers are the main 'apparatus of punishment'[36] through which power was executed and discrimination perpetrated. This discrimination translated into violence including, but not restricted to, verbal abuses ("*you deserve nothing*"), not getting medication that was available for other people at the center, access to food ("*why do you complain if outside you have nothing to eat*"), clothes or services ("*no phone calls for Government Requests*"), and having to do all the cleaning at the centers (having to hand wash all the blankets) among others. The next paragraphs will describe and analyze the most distinguishing violations of human rights: (1) coerced consented admission, (2) overcrowded 'detox rooms', and (3) absence of medical services.

3.1 Coerced consented admission at drug centers. Some, but not all participants were asked to sign a consent for admission. Of those, none of them read the document they were signing either because they were still intoxicated at admission or because they just did not pay attention. Most of those who signed voluntarily assumed they were agreeing to stay for 3 months, but by the end of that time they were told that in fact they had signed for 6 months. Even more concerning are the cases of those who were forced to sign the consent. There were accounts from both women and men that were threatened

to be detained indefinitely if they did not sign. Others were told that "*their time would not start to count until they sign*", and others were told that it did not matter whether they signed or not since the managers would sign on their behalf anyway ("*either you sign or I sign for you*"). Confinement then, did not intend to reform but to control.[48] A woman refers to this experience as the worst out of the 5 times she has been at a drug center. She affirms that she would not denounce the abuses she suffered because she has no proof of the involuntary nature of the detainment –because she was forced to sign.

3.2 Overcrowded detox rooms. All centers had a room called the "detox room", which is a cell where the recently admitted are locked until the most severe withdrawal symptoms have passed. The average length of stay is 4 days, but some participants reported having stayed there for over a month because the center was overcrowded. Some reported the centers were so overcrowded that they spent the first night standing up –not having space to sit down-. After the first night, some were taken to another center, also overcrowded, where they had to share beds. To be in an overcrowded room with everyone having withdrawal symptoms at the same time is probably the least likely condition in which PWID will come to consider a drug-free life, which is known as the stage of contemplation that precedes the behavior change (i.e., reducing or stopping drug use) (Norcross et al., 2011). Users reported that being faced to their own and others' withdrawal symptoms psychologically heightened their intense need of the drugs.[49]

3.3 Absence of medical services. There are multiple UN statutes in which the right to health is considered a fundamental human right[50] and Mexico is a signatory. However, in reality it is a complex goal to reach, especially among poor people living in extreme conditions,[51] such as our sample. In fact, what occurred at the drug centers was not only

a continuation of the structural violence lived on the streets. Violence was increased as a consequence of the detainment and restriction from the few resources they had access to while living on the streets (e.g., access to a public hospital). Denied access to health services translated into suffering and pain that has been considered by some as torture.[52] Violence and psychological abuse are exposed in the absence of medical services.

The main complaint of most of the participants was that at the drug centers, they were not given any medication to ameliorate the withdrawal symptoms. About a quarter of the participants reported that they received medication for withdrawal, but in all cases it consisted of sedatives. There were also cases in which participants were concerned about other health issues. A woman with a urinary tract infection recalls being in increasingly severe pain and not being treated or even examined, as a consequence, she began suffering incontinence, for which she was punished. She then decided not to drink too much water in order to avoid being punished again and this increased the pain even more. Two women who had previously been diagnosed with epilepsy suffered from seizures. One of them was on medication and her treatment was discontinued when she was taken to the center. They both had seizures and were not seen by a health professional because the managers considered they were faking the seizures to avoid helping in the cleaning activities of the center or to be discharged. One of them expressed her concerns about the mistreatment:

> If we are here for Government Request then we should have got the basics, right? But no, in that sense we really struggled (Woman, 46).

The most striking case of violence and discrimination was exposed by a recently amputated man that lost his leg as a consequence of a bad injection (i.e., unsuccessful

venipuncture). While at the drug center, he was mistreated and discriminated for being homeless and the managers did not have special considerations towards him due to the amputation. As a result, he suffered several falls that damaged the recently amputated leg. He constantly requested to be seen by a doctor, to be taken to the hospital or to make a call so someone could take him to the hospital. He was not taken to the hospital because the center was not going to spend money on gasoline, but he was not allowed to call his family to take him to the hospital either. He ended up escaping by threatening *servidores*[3] with a razor blade and going to the hospital by himself to have the amputated leg checked:

> I am not asking to be treated like a king, only to get the medication I needed… There is a lot of injustice. Think of all the centers there are, how many people there are… that are mistreated… (Man, 50).

Consistent with the characterization of the use of torture by local authorities to inflict disciplinary power,[38] missed medical interventions were not only negligence but a form of torture that sought the complete docility of the individuals. While infections certainly need to be taken care of, mental health is an even more neglected issue among homeless people. Two women reported signs of need of mental health services, including a participant that was discharged because she had psychotic symptoms and another woman who had a suicide attempt when she was taken to the drug center. Both participants, instead of being referred to care were punished –sent back to the detox room- for their symptoms and behavior.

Only one participant reported being seen by a doctor at the time of admission as the law stipulates.[23] Others were seen at some point by a doctor or health provider but

[3] People who used drugs that enter the drug centers as interns but that are now recovered and volunteer their *service* to the center.

mostly to get a general check-up that included height, weight and blood pressure. Some participants hypothesized that this was done only to be able to provide information to the government of the people that were taken from the canal but not to provide further treatment.

These experiences are in line with the mechanism of power exercised by the local government to control PWID was disciplinary power, not biopower or biopolitics. Biopolitics are strategies that control the living conditions, morbidity, and mortality,[53] and are closely related to the use of public health and control of the population and not the individuals.[54] Since there were almost no health care provided, but an individualized stigmatization we cannot talk of the control of the population. It seems then that once at the drug centers, participants did not question the power of the State to control their actions but the distinction between the power inflicted towards them -disciplinary- compared to the medicalization of drug use that they saw in other users at the center – biopower.

4. Lack of State oversight

Lack of supervision within the drug centers translated into an even more pronounced violence towards PWID. Government officials visited a few centers to make inspections or basic health fairs. For some participants, these inspections were the only time they were seen by a doctor. These inspections mainly focused on looking at before/after detention pictures, and talking to some of the *interns*. However, before these visits, *servidores* told *interns* they were not allowed to complain or they would be punished. Also before the inspections, people that were locked in the detox rooms were

temporarily allowed to be in the common areas as a way to disguise the overcrowding conditions.

A participant reported to have been at the same center before and during the *Operativo* and stated the conditions and discrimination were far worse in the latter. Interestingly, she also expressed ambivalence about justifying mistreatment and abuses since people misbehaved and there were too many people that the *servidoras* could not deal with them otherwise.

> I: So, you said you had just been at a center?
> P: Yes, at the same center. I had been out [of the center] less than 2 weeks. They [the *servidores*] did not behave well, they did a lot of things to me…
> I: But wait, the first time you were at that center, did you go voluntarily?
> P: Yes, I wanted to be there. It was very different. Very different.
> I: How was it different?
> P: Very different. No, very different. Look, [there was a] a lot of discrimination, every little thing that happened "oh, [it was] the ones from *El Bordo*", something else happened and "oh, [it was] the ones from *El Bordo*". The truth is that one day I couldn't take it any longer and I said "well, I am sick of this. Only we [are blamed]". And then… what surprised me the most was that the ones that were not from *El Bordo*, if they came close to us, they used a face mask. "But why? Why do they do that if we're not sick?"
> ...
> I: Were you hogtied?
> P: No, no I wasn't hogtied. Because I behaved. But they [the *servidoras*] did hogtie.
> I: Did you see people hogtied?
> P: Yes, a girl that is called [name], she was hogtied. Because she hit them. (Woman, 48).

Another participant was also ambivalent about how the *Operativo* worked. On one hand he considered it was an overall positive thing to have people evicted from the canal- including himself- because homelessness and drug use was becoming too visible. However, he criticized the lack of supervision from the government on the drug centers and from the owners of the drug centers on the *servidores*. This gives an idea of the hope

people still had on the government as protector of their rights, similarly to what Foucault describes in the natural process of seeking a sovereign right power that controls the situation.[36] In this case, people were expecting a more paternalistic government. A participant even referred to 'big daddy State' (*papá gobierno*) when the government officials provided sacks of rice and beans: "*Finally! Big daddy government sent the remittances*".

5. *'Treatment' ineffectiveness*

Drug centers are institutions of power that play a key role in shaping the lives of 'addicts'.[49] What was considered as treatment at the drug centers were ongoing Narcotic Anonymous (NA) meetings, abstinence-only withdrawal process. That is, there were no medicalized approaches to substance use disorders. Among study participants there was no opioid substitution therapy and no psychosocial therapy, both of which have shown to be more effective for heroin use, whereas abstinence-only models have not. Additionally, there were no referrals with social services that could link PWID to services after discharge to cover their basic needs (e.g., housing, food, clothing, etc.). This lead to an almost expected relapse, which is expressed by a woman who was concerned with the unintended consequences of involuntary treatment provided by non-professionals:

> Look, so I don't know what the government is trying to do, I don't know, they're never gonna stop people doing drugs, you know, forcing people won't work. It's gonna make it worse. It's ridiculous! Because they're kidnapping us! You know. And somebody is gonna get hurt… A lot of people are not trained, and they don't even know what to do with us, but there they are! (Woman, 42).

In our sample, there was only one report of a center that offered training workshops such as beautician training, cooking and other basic skills. However, even in this environment, Government Requested people were not allowed to attend the courses because they could not afford the cost of the materials. There were no opportunities to learn new skills with which they would have had a better chance of finding a job and change their living situation.

Since prisons are the main disciplinary institution, participants referred to their time at drug centers as if they were imprisoned in phrases such as "*I was given 3 months*", "*I served my time*", and "*I did my time*". The standard time that most should have stayed according to *Tijuana Mejora* was 3 months, but most of the participants escaped. There are reports from two participants that stayed for up to 6 months and then escaped. The ones that did not escape were persuaded to stay longer, to "do their time" and that they would be linked to a job. The few that agreed to stay did not get the promised job and eventually escaped. In the literature, there have been previous accounts of the use of "doing time" in relation to substance use treatment.[55] This indicates that the lived experience may be generalizable to other settings of involuntary treatment.

Servidores turned a blind eye when most of the people escaped. Consequently, a participant referred to it as a "fake escape" (*fuga disfrazada*). There were a few ways a fake escape could be arranged. First, it could be arranged with a *servidor* to be allowed to leave quietly in the middle of the night. Second, if a person was causing too much trouble at the center, either by asking for their rights to be respected or organizing a riot in which all could escape, the manager would open the door to that person and hence prevent a bigger problem. This is also how the man with an amputated leg was able to

escape. Both to threaten to riot and to physically hurt *servidores* are violent responses caused by violent mistreatments. The third and most common way to escape was to send people to provide a *service* to the municipality or beg for money on the streets and then not ask them to go back to the center. As disciplinary institutions, drug centers sought to take advantage of the free labor of people detained; they are businesses that outsource cheap labor to the municipal government. As such, a fake escape is allowed once the "interns" performed the free labor for which the center will be reimbursed by the municipality.

Some of the participants felt that involuntary treatment is sometimes needed because there are people that would never go to treatment by themselves and that "upsets" the government. According to this participant, what upsets the government is that chronic heroin users eventually turn into crime to sustain their use *("several people cross the line… they go… not only do they use drugs but then they… you know… they do a mess in the city and that is what upsets the government"*).This has been previously analyzed by Bourgois referring to how petty crime legitimates repressive responses towards drug users.[56]

Almost all the participants considered their experience to be ineffective in terms of helping them decrease drug use. Some thought it was ineffective because it was involuntary (and referred to it as a fraud) or because although they were aware of their treatment need, they would have rather chosen the time and type of treatment. But also, others thought it was ineffective because of the characteristics of the centers, including the mistreatment inflicted by people that worked at the centers, most of which had gone

through withdrawal themselves and yet, underscores lack off training. Others elaborate on the problems they face when they go out of the center:

> One starts to think 'well, I believe this is right [to stop injecting drugs]', but when you go out [back on the streets], I mean, you say… once you're out everything changes (Man, 36).

In this case, a man considered permanently stopping using drugs but once outside of the center he relapsed as soon as he went back to the same drug using context in which he had lived. A woman expressed a similar experience by saying that her "*greatest mistake is to always go back to the Red Light District*" because whenever she is there she will use drugs. She also reflected on the importance of having a job and keeping herself busy. This relates to the individualistic model of substance use both as a moral failure and as independent of the contextual factors in which Alcoholic Anonymous (AA)/NA are based,[21] in which although she is aware the environment influences her use, she does not realize it is a structural problem combined with the chronic nature of addiction and not her moral failure that she has to go back to the same place where she used to live -and use drugs-.

DISCUSSION

Disciplinary power was the prevalent mechanism of power at drug centers where PWID were detained through the federally funded security *Operativo Tijuana Mejora*. Participants in this study were all members of Tijuana's most marginalized populations. Aware of their exclusion of the mainstream dynamics of power, the most prevalent complaint was that there was not an adequate supervision of the drug centers by the State. At a broader level, this may translate in the willingness of PWID to become citizens

of the State, which includes being controlled but also protected by the State. Other studies with other populations of homeless drug users show the refusal to accept the State's legitimacy to enforce any kind of measure towards them.[57] In contrast, PWID in Tijuana would have complied if the drug centers had the adequate tools of discipline (e.g., medical services).

In Mexico, as in most countries, there is a general tolerance of violent police actions in urban areas related to drug trafficking. Substance use is the dimension of urban poverty most susceptible to short-term policy intervention.[58] As such, poor people who use drugs are exposed to constant police harassment.[59] Although policing programs such as the one described in this paper may superficially and temporally addressed the homelessness problem in the Tijuana river canal, it was certainly not the remedy for the evicted people problems, not even substance use since arguably all of them relapsed into injection drug use. In this paper we expose the ill effects this *Operativo* had on PWID in Tijuana.

Drug treatment, as a form of medical care, must comply with established standards of quality health care.[5,60] As such, access to medically appropriate drug treatment should be tailored to the person's individual needs, which includes the right to refuse treatment.[5] However, if the existing laws allow involuntary drug treatment, it is the responsibility of the State to provide evidence-based interventions. Consequently, in 2011, treatment for substance use disorders was included in *Seguro Popular*, Mexico's universal health care system for those with no other health insurance nationwide (i.e., underserved and poor population).[61] To date, access to out-patient treatment is provided nationwide through 341 public centers.[62] These type of treatment is needed but inadequate to cover the

needs of the most problematic users with chronic addiction, especially for those, as our sample, that may lack official documents (e.g., birth certificate or other type of identification) and cannot enroll *Seguro Popular*. As such, most of this population is treated at centers not run by the government, due to lack of infrastructure and human resources to cover all the need of treatment.[18] Drug centers then, are covering the treatment gaps that the State cannot provide, not even for those mandated to treatment by the federal policies.[23,63] According to NOM-028, drug centers need to be certified in order to be recognized by the State and consequently to receive public funds. This has two implications: the first one is that drug centers that participated in the *Operativo* are certified and still violate human rights; and second, they are not certified but they still received public funding.

Non-evidence based interventions such as the ones provided by drug centers, often aim to get people who use drugs to a drug-free abstinent life. To coerce people into abstinence disregards the chronic nature of drug dependence as well as the scientific evidence of the ineffectiveness of punitive measures.[6,11,64-66] Consequently, once people are discharged from involuntary drug treatment they will likely relapse.[9,67]

PWID in Tijuana who used to live in the Tijuana river canal are in the most part chronic heroin and methamphetamine users, for which treatment programs should be tailored. This *Operativo* was in fact tailored to this specific population but not in the sense of targeting their problematic, but as the problem *per se*. Those who had worked in social services for the community for a long time and have seen this population were well aware of how injection drug use is only one of the problems embedded in a context where chronic poverty, marginalization, lack of education and job opportunities are barriers to

recovery. It was only expected that chronic homeless PWID would have more than one health condition other than substance use disorders, it should have been expected to have to provide care for infections, chronic diseases, and disabilities. As such, involuntary treatment not only did not translate into less use, but it inflicted violence and its deleterious consequences are still suffered even a year after the event. A human rights perspective is useful in the development of policy interventions to further protect individuals' health and wellbeing.

While all the participants held themselves accountable of their relapse in drug injection, there is a lack of a deeper analysis in that accountability. Some of them assume their responsibility of injecting drugs and understand that they relapsed because they went back to the same area of the city in which heroin and methamphetamine are easily obtained. Others accept their responsibility of getting back together with that partner or friends that also inject drugs. While this is true, there is still the uncertainty of determining whether they had any other option based on their context and living conditions. A social justice approach allows us to see that the behavior of this population is in part consequence of the actions of the powerful.[51] For instance, the *Operativo* that took them to the drug centers did not contemplate their future but only their displacement from their unstable housing. It is then not surprising that all but one participant engaged in drug injection after the involuntary treatment experience.

Limitations

Our sample of PWID in Tijuana is characterized by chronic heroin and methamphetamine use in the context of poverty in one of the most unequal international

borders. As such, our findings of the experience at drug centers and involuntary drug treatment may not be generalizable for all PWID in Mexico or internationally. However, we had a unique opportunity to analyze a public security measure that violated human rights of one of the most vulnerable populations in the Mexico-U.S. border region. Self-report may also be a limitation; however, we prioritized to give a voice to PWID in the quest of promoting social justice research in the public health realm. Finally, desirability bias may be present in the narration of their experience. However, the reports of this sample on physical and verbal abuse are comparable to what others had previously reported from studying annexes.[46,47]

Conclusions

The uncertainty lived at the time when participants were involuntarily taken to treatment centers set a violent context in which PWID were supposed to improve their health by drug detoxification. People taken to the treatment centers were not screened or selected based on an objective measure but by their physical appearance. Once at drug centers, Government Requested users were discriminated and stigmatized, stressing the structural violence lived in the streets. Regardless of this violence, the main complaint was the lack of State oversight of the drug centers, which exemplified how PWID are not part of the population that the State protects. Overall, this study provides an insight of how health, wellbeing, human rights, dignity, and security of people who use drugs ought to be at the center of international drug policies included in universal health care systems.[68] Public programs that force people into abstinence in a secluded context are a violation of human rights and have a negative health impact on PWID.

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CHAPTER 3: INCREASED NON-FATAL OVERDOSE RISK ASSOCIATED WITH INVOLUNTARY DRUG TREATMENT IN A LONGITUDINAL STUDY WITH PEOPLE WHO INJECT DRUGS

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ABSTRACT

Aims: International research has shown long-term ineffectiveness of involuntary drug treatment in sustaining drug use remission. Cross-sectional studies have demonstrated its deleterious health effects and potential for human rights violation. We longitudinally assessed the effect of involuntary drug treatment on non-fatal overdose.

Design: In 2011, people who inject drugs (PWID) in Tijuana, Mexico who were at least 18-years old and reported injecting drugs in the prior month were enrolled in a prospective study.

Participants: Participants completed interviewer-administered surveys at baseline and every six months (12 visits). For this analysis, we included participants with at least two survey visits (n=670; mean: 8 visits).

Measurements: Generalized estimating equation analyses were conducted on reported recent (i.e., past 6 months) non-fatal overdose event (dependent variable) and involuntary drug treatment as the primary independent variable.

Findings: From March 2011 to March 2017, 211 participants (31.5%) reported a recent non-fatal overdose and 101 (15.1%) reported recent involuntary drug treatment, of whom 78 (77.2%) reported being treated once, 19 (18.8%) twice, and 4 (4.0%) three or four times. Controlling for sex, age, and daily injection frequency, involuntary drug treatment significantly increased the odds of reporting a non-fatal overdose event (Adjusted Odds Ratio [AOR]: 1.9; 95% Confidence Interval [CI]: 1.1-3.3; p=0.04). Odds of overdose also independently increased for each additional injection per day (AOR: 1.1; 95% CI: 1.0-1.1; p<0.0001) and decreased with age (AOR: 0.96, 95% CI: 0.94-0.98; p<0.0001).

Conclusions: This study highlights the life-threatening risks PWID experience associated with involuntary drug treatment. Policy implications include the PWID's right to choose the circumstances of treatment, the need for treatment staff training in overdose prevention at drug treatment centers, and patients' education on resources and treatment options upon release. Mexico should consider ending its policies related to involuntary drug treatment, promote adequate training of drug treatment staff, and improve oversight of treatment centers.

KEYWORDS: People who inject drugs; non-fatal overdose; generalized estimating equation; involuntary treatment; cohort study; Tijuana.

INTRODUCTION

Several countries have implemented some form of involuntary drug treatment, ranging from treatment administered within the civil commitment framework in the United States to legally-mandated and enforced drug treatment such as forced labor camps in South-East Asia.[1,2] Although widely implemented, there is little evidence of the effectiveness of compulsory treatment in sustaining drug use remission.[3] Globally, involuntary drug treatment has also been associated with high rates of relapse at the individual level and with forced labor and corporal punishment at the structural level, conflicting with fundamental human rights principles.[4,5]

Another potential detrimental effect of involuntary drug treatment is that it may increase the risk of overdose. Periods of involuntary drug abstinence (e.g., jail or prison)[6] among persons with opioid drug addiction have been associated with an increased risk for fatal opioid overdose.[7] This may be related to a loss of tolerance and untreated addiction.[7] Few studies have examined the relationship between drug treatment (voluntary and involuntary) and non-fatal overdose. There is inconclusive evidence for the association between overdose and drug treatment. For instance, with one-year of follow-up after treatment, an English sample of people who use drugs (PWUD; injecting and non-injecting) from the National Treatment Outcome Research Study, showed no association between rates of overdose with voluntary drug treatment.[8] In San Francisco, Ochoa et *al*.,[9] found that last year overdose among PWID was associated with lifetime

history of drug treatment. Also in San Francisco, Seal and colleagues[10] found that recent non-fatal overdose among PWID was associated with having been imprisoned but was not associated with drug treatment. A national cohort study in Italy among PWUD showed that retention in any drug treatment was protective against fatal overdose but also showed an excess mortality risk in the month following treatment.[11] A study among PWID in Vancouver, Canada found that being denied drug treatment was significantly associated with recent non-fatal overdose.[12]

To our knowledge, only one study has addressed the association between involuntary drug treatment outside of prison settings and overdose.[13] This study was conducted among a Thai cohort study of people who inject drugs (PWID) and found no association between history of forced treatment and overdose.[13] However, temporal understanding of the relationship between recent involuntary drug treatment and recent experiences of non-fatal overdose among PWID is largely absent from the literature.

To address this gap in knowledge, we analyzed involuntary drug treatment in a cohort of PWID in Tijuana, Baja California, Mexico. In Mexico, involuntary drug treatment may take the form of: (1) mandated treatment after a three-strike rule upon being presented to a judge for drug possession for personal consumption,[14] (2) requests to a judge by a family member,[15] and (3) requests made directly at a drug center by a family member (which is against the law but common).[16] Due to its nexus as a drug-trafficking point with the U.S., and subsequent drug availability, Tijuana is one of the cities with the highest prevalence of drug use; it is also located within Baja California, the state reporting the highest proportion of criminal justice mandated treatment nationwide.[17]

In Tijuana, as in the rest of the country, most of the drug using population is treated at centers run by small non-government agencies, many times led by former drug users, their families, and/or religious groups. Informal treatment centers exist due to lack of infrastructure and human resources needed to meet the demand for treatment in the city.[18] These centers, known as 'annexes' operate outside of government oversight and run with minimal or no cost to families.[19,20] A number of annexes have been exposed as both physically and verbally abusive towards their clients.[16]

The aim of the current study is to improve understanding of the impact of drug treatment experiences among PWID through a longitudinal study of their recent involuntary drug use treatment experiences and non-fatal overdose risk in the city of Tijuana, Mexico. We hypothesized that PWID that have recently experienced involuntary drug treatment will be significantly more likely to also report recent non-fatal overdose events, compared to those with no involuntary drug treatment experience.

METHODS

Sample

PWID were recruited to the *El Cuete* IV cohort study in 2011 through targeted sampling, which consisted of street-based outreach in 10 neighborhoods across Tijuana.[21] Inclusion criteria comprised being 18 years of age or older, having injected drugs in the past month, speaking English or Spanish, currently living in Tijuana with no plans to move over the next 18 months, and not currently participating in an HIV intervention study. Participants completed interviewer-administered surveys at baseline and every six months (12 visits at the time of the analysis) and received $20 USD per

visit. Recruitment and data collection activities took place from 2011 to 2017. For this analysis, we included participants with at least two visits (n=670; mean: 8 visits) within the observation period. The study protocol was approved by the Human Research Protections Program of the University of California, San Diego and by the Ethics Board at El Colegio de la Frontera Norte.

Measures

Data were collected by trained interviewers who administered surveys using computer-assisted participant interview (CAPI) technology. Survey items included sociodemographic characteristics, drug using behaviors and contextual factors surrounding drug use and treatment. Our outcome variable was defined as having recently (i.e., 6-months) suffered a non-fatal overdose. We used the following question: "*in the last 6 months, how many times have you overdosed? This includes* any *situation where you passed out and couldn't wake up or your lips turned blue*" to create a binary dummy variable (yes/no) of reporting at least one non-fatal overdose in the past six months. The primary independent variable was past six-month involuntary drug treatment, a variable we created for this analysis based on participants' reports of having been enrolled in rehabilitation center in the past six months ("*In the last 6 months, have you enrolled in a rehabilitation center? By rehabilitation center, I mean a place where you went and stayed overnight for help with your drug or alcohol problems*"), and to have been enrolled involuntarily at the rehabilitation center ("*The last time you enrolled in a drug rehab center over the last 6 months, did you go voluntarily to this most recent rehab center?*") or to have been forced by law enforcement officials ("*I was forced by law*

enforcement officials" as answer to "*What are all the reasons that you decided to enroll in this most recent rehab center?*"). Additional independent variables of interest included in the current study were: age, sex, housing status (i.e., living in a house or apartment owned by participants, their parents, friends, or partner vs. other), marital status (i.e., married vs. other), hit doctor *("In the last 6 months, have you sought the help of a "hit doctor" to inject drugs?"*) daily injection frequency, and type of drug most frequently injected. Daily frequency of injection was a variable created based on injection drug use questions on the following drugs: heroin, cocaine, heroin and cocaine, methamphetamine, methamphetamine and cocaine, methamphetamine and heroin, china white, china white and heroin, china white and methamphetamine and ketamine. For example, participants were asked "*During the last 6 months, have you injected heroin by itself?*" If the answer was positive, then they were asked "*During the last 6 months, how often have you injected heroin by itself?*" with the following possible answers: "*One per month or less"*, *"2 or 3 days per month"*, *"once per week, 2 to 3 days per week"*, *"4 to 6 days per week"*, *"once per day"*, and *"more than one time per day every day*". If the answer was "*more than one time per day every day*" then the value of "*How many times a day do you inject heroin by itself?*" was used. Heroin was then coded as 0 for less than daily, and the number of times that participants reported injecting per day was entered. This was repeated for each of the drugs and drug combinations and summed. For type of drug most frequently injected we used two variables: heroin only and heroin and methamphetamine. These are the two main patterns of injection drug use among participants in this cohort according to a previous analysis.[22]

Analyses

Descriptive summaries were performed for data on recent (i.e., past 6 months) non-fatal overdose; chi-square tests were performed for categorical variables, and Wilcoxon tests for continuous variables at baseline.

Univariate and multivariable marginal models using generalized estimating equations (GEE) were also performed. This analytic technique models the outcome while taking into account the correlation between visits within subjects and provides an estimation of standard errors. The outcome variable was reporting a recent non-fatal overdose event and our primary independent variable was involuntary drug treatment. The marginal models were fitted specifying an exchangeable working correlation structure. First, univariate GEE analyses were generated to determine whether the main independent variable (i.e., recent involuntary drug treatment) and potential confounders (as listed above) were associated with recent non-fatal overdose. Second, a multivariable GEE model was constructed including those that were significant at $p < 0.05$ in the univariate model. We included sex in the multivariable analysis regardless of its significance because of the considerable sex differences in substance use and overdose risk reported in the literature.[23,24] For the GEE models, we restricted the analyses to the visits in which participants reported past-6 months injection drug use. All analyses were performed in SAS 9.3 software.[25]

RESULTS

The baseline sample of 670 PWID included 258 (38.5%) women and 412 (61.5%) men. The median age was 37 (Interquartile Range [IQR]:31-44) and the median number

of injections per day was 4 (IQR: 3-6). There were 64 (9.6%) participants with at least one recent non-fatal overdose at baseline. The bivariate associations between recent overdose and sociodemographic characteristics are shown in Table 3.1. Those who reported a recent overdose were significantly younger than those with no recent overdose (median: 33.5 vs. 37; $p = 0.003$), and there was a higher proportion of women than men (12.4% vs. 7.8%; $p = 0.01$). There were no significant differences by marital and housing status. Regarding drug-related variables, there were no significant differences in recent non-fatal overdose reporting by recent involuntary drug treatment, recently requiring help to inject from a 'hit doctor', type of drug most commonly injected in the last 6 months, and number of injections per day.

From March 2011 to March 2017, a total of 211 (31.5%) participants experienced at least one overdose, of whom 96 (45.5%) experienced one event, 38 (18.0%) two events, 55 (26.1%) three to five events, 11 (5.2%) six events, and 11 (5.2%) seven to 17 events. The median number of overdoses among those who reported experiencing it at least once was 2 (IQR: 1-3).

During the period of observation, 101 participants (15.1%) reported recent involuntary drug treatment, of whom 78 (77.2%) were forced to enter once, 19 (18.8%) were forced twice, 3 (3.0%) were forced three times, and 1 (1.0%) was forced four times. All participants were to taken mutual aid/12-step programs and religious-based groups, none of them run by the government. The median number of recent experiences with involuntary drug treatment among those who experienced it at least once was 1 (IQR: 1.0-1.0), and the median time at the drug center spent was 3 months (IQR: 1.61-5.00).

Table 3.2 shows the GEE univariate and multivariable analyses. Non-fatal overdose was significantly associated with younger age, having experienced involuntary drug treatment and greater daily injection frequency. Having been taken involuntarily to drug treatment increased the odds of non-fatal overdose (OR: 1.87; 95% CI: 1.08-3.25). There was a decrease on the odds of non-fatal overdose for each additional year of age (OR: 0.96; 95% CI: 0.94- 0.98). For each additional injection per day the odds of non-fatal overdose were increased (95% CI: 1.04- 1.09). There were no significant associations between non-fatal overdose and type of drug most frequently injected and sex. Controlling for time, sex, age, and daily injection frequency in our model revealed a statistically significant association between involuntary drug treatment and overdose (Adjusted Odds Ratio [AOR]: 1.93; 95% CI: 1.12-3.34). Additionally, we also found that for every additional injection per day, the odds of overdose significantly increased (AOR: 1.06; 95% CI: 1.04-1.09); and that the decrease in the odds of non-fatal overdose for each additional year of age (AOR: 0.96; 95% CI: 0.94- 0.98) was also maintained.

DISCUSSION

Study findings confirmed our hypothesis that PWID who have recently experienced involuntary drug treatment will be significantly more likely to also report recent non-fatal overdose events. Our study also highlights the common occurrence of non-fatal overdose among our sample of PWID in Tijuana. Over a period of six years, we found that almost one third suffered at least one non-fatal overdose, more than half of whom had more than one event. Additionally, more than one fifth experienced involuntary drug treatment.

Although we cannot determine a causal relationship between recent involuntary drug treatment and recent non-fatal overdose, qualitative analysis we conducted simultaneous to this paper,[26] suggests that most of the PWID in our sample are not prepared to stop using drugs when they are taken involuntarily to drug treatment. This, in addition to the loss of tolerance related to abstinence periods, likely puts them at a higher risk of overdosing. As described above, almost all of the drug centers in Mexico involved in involuntary treatment do not have evidence-based treatment and are restricted to abstinence-only treatment models.[27] Further, PWID are not provided with naloxone on released nor referred to services where they could receive naloxone to help reduce risk of fatality in the event of a relapse-related overdose, or where witnessing another person's overdose.

The proportion of non-fatal overdose in our sample is similar to that found over a 7-year period among PWID in Vancouver (32.7%).[12] However, in contrast to the Vancouver study, we did not find a significant relationship between type of drug used and non-fatal overdose events. Contrary to what others have also found,[12,28] we found that younger users were more likely to overdose, and we did not observe an association between polydrug use and non-fatal overdose. PWID in Tijuana mostly inject heroin by itself or co-inject it with methamphetamine, but there is not a wide range of use of other combinations of substances,[29] which may explain the former differences. These findings suggest that overdose prevention efforts among this population should focus on young PWID and address frequent injecting as a risk factor.

Although one study found that being denied access to drug treatment is significantly associated with an elevated risk of non-fatal overdose,[12] our study extends

this research by showing that experiencing *involuntary* drug treatment increases the odds of non-fatal overdose. The United Nations Office of Drug and Crime (UNODC) stipulates[30] that involuntary drug treatment ought to be considered a type of low security imprisonment or deprivation of basic human rights, an assertion supported by our data, and one which suggests the experiences of our participants should more readily be compared with imprisoned individuals.[12,31] People who use drugs that are released from prison usually return to environments that trigger relapse to drug use and put them at risk of non-fatal and fatal overdose.[6,32-34]

This study highlights several future research directions. First, future studies should analyze how involuntary drug treatment affects subsequent treatment-seeking and whether in fact involuntary treatment is causally related to overdose risk. Second, we showed an association between involuntary drug treatment and non-fatal overdose, the next step is therefore to address fatal overdose after involuntary drug treatment. Indeed, there is sufficient evidence that non-fatal events are strong predictors of other non-fatal[35,36] and fatal events, including fatal overdose.[37,38]

Limitations

This study has several limitations. First, the sample consists of older PWID that have injected on average for over 20 years. It is possible that the risk of overdose after involuntary drug treatment experiences is different in a younger, less experienced population. Second, due to limited sample size, to achieve statistical power we grouped all the involuntary drug treatment experiences and it may be that differences exist depending on the nature of the involuntary drug treatment (e.g., law enforcement, family

or partner). However, people that are taken involuntarily to treatment by their relatives go to the same centers in which law enforcement officers involuntarily detain users.[27] Third, it is also possible that some PWID who reported having been in drug treatment voluntarily may have been coerced into agreeing to go into treatment, and therefore we would be underestimating the proportion of PWID forced into treatment. Fourth, since we used self-reported measures, there may be recall bias. However, non-fatal overdoses and involuntary drug treatment are traumatic events that are unlikely forgotten. Finally, there may be other characteristics related to non-fatal overdose that we did not include in the analysis, such as mental health disorders.[39,40] Comorbidity between substance use disorders and other mental health disorders has been documented in a range of settings, including in Mexico.[18] To our knowledge, there is no evidence that people at involuntary drug treatment suffer more mental disorders than the rest of the people who use drugs.

The spiraling opioid overdose crisis in North America is fueling increased policy and programmatic emphasis on coercive treatment modalities.[41] Conversely, there have been requests for the UN to issue calls to permanently close compulsory drug detention centers.[42] While we fully agree with this recommendation, closing drug centers is a complex endeavor that requires public financial and human resources. We argue that the limited resources available need to be allocated to voluntary, evidence-based drug treatment. In Mexico, the median years of delayed treatment since the onset of a substance use disorder is of 10 years.[43] That is, the general population would greatly benefit from the institutional strengthening and expansion of treatment services for those that are aware of their treatment need and willing to engage in treatment. Public and private efforts would be needed for a successful transition from involuntary to voluntary

service provision, and to assist in transitioning from non-evidence based 'treatment' to evidence based treatment in terms of changing treatment centers' protocols of admission, referrals and case management programs.

Conclusions

Overall, this study highlights the life-threatening risks PWID experience in relation to involuntary drug treatment. Policy implications include government and treatment centers' respect for PWID and their right to choose the circumstances of treatment. Professionalization of treatment providers and oversight of addiction treatment agencies will reduce the potential consequences of being discharged into the same psychosocial context of previous drug use, and the need to include overdose prevention at drug treatment centers and upon release.[32,33,44] Policies and practices related to involuntary drug treatment in Mexico and elsewhere should be reformed, including sufficient oversight and sanctions for agencies that do not abide by policy and treatment standards. Doing so can vastly reduce overdose risk and improve the health of PWID and other drug users.

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Table 3.1 Baseline data on non-fatal overdose in the past 6-months among people who inject drugs. *El Cuete* IV. Tijuana, Mexico, 2011-2017 (n=670).

	No n= 606		*Yes n= 64*		*p-value*
	n/median	*%/ IQR*	*n/median*	*%/ IQR*	
Age	37	31-44	33.50	27-40	**0.003**
Gender					
Women	226	87.60	32	12.40	**0.047**
Men	380	92.23	32	7.77	
Marital status					
Unmarried	329	90.63	34	9.37	0.859
Married	277	90.23	30	9.77	
Housing status[a]					
Unstable	27	81.82	6	18.18	0.084
Stable	579	90.89	58	9.11	
Involuntary treatment[a]					
No	596	90.72	61	9.28	0.066
Yes	9	75.00	3	25.00	
Hit doctor[a]					
No	264	91.03	26	8.97	0.270
Yes	120	87.59	17	12.41	
Heroin most frequently injected drug[a]					
No	215	90.34	23	9.66	0.990
Yes	382	90.31	41	9.69	
Heroin with methamphetamine combined most frequently injected combo[a]					
No	400	90.50	42	9.50	0.824
Yes	197	89.95	22	10.05	
Injections per day[a]	4	3-6	5	3-8	0.089

Wilcoxon for continuous variables; Chi square for categorical variables. IQR: Interquartile range. Significant variables at $p < 0.05$ are bolded. [a]In the past 6 months.

Table 3.2 Univariate and multivariable generalized estimating equation analyses for factors related to reporting non-fatal overdose in the past 6 months among people who inject drugs. *El Cuete* IV, Tijuana, Mexico, 2011-2017 (n=670).

	OR	*95% CI*		*p-value*	*AOR*	*95% CI*		*p-value*
Age	0.96	0.94	0.98	**<0.0001**	0.96	0.94	0.98	**<0.0001**
Female	1.16	0.86	1.57	0.328	1.03	0.76	1.40	0.85
Involuntary drug treatment	1.87	1.08	3.25	**0.026**	1.74	1.03	2.94	**0.04**
Heroin most injected drug	0.90	0.69	1.16	0.396	-	-	-	-
Heroin and methamphetamine most injected combo	1.08	0.83	1.41	0.566	-	-	-	-
Daily injection frequency	1.06	1.04	1.09	**<0.0001**	1.06	1.03	1.09	**<0.0001**

OR: Odds Ratio; AOR: Adjusted Odds Ratio; CI: Confidence Interval. Significance at p <0.05 bolded.

CHAPTER 4: VOLUNTARY TREATMENT ENROLLMENT AFTER SUBSEQUENT INVOLUNTARY TREATMENT EXPERIENCES AMONG PEOPLE WHO INJECT DRUGS IN TIJUANA, MEXICO: A MIXED METHODS APPROACH

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ABSTRACT

Aim: To determine whether and how involuntary drug treatment experiences affect subsequent voluntary drug treatment enrollment among people who inject drugs (PWID) in Tijuana, Mexico.

Methods: In 2011, PWID who were at least 18-years old and reported injecting drugs in the prior month were enrolled in the parent study (*El Cuete* IV). Participants completed interviewer-administered surveys at baseline and every six months (13 visits). Cox regression was conducted to identify the factors related to "any voluntary drug treatment" in the past 6-months (outcome) among those with no prior voluntary or involuntary treatment history at baseline (n=359) (Phase I). A subsample of 25 participants were

interviewed to explore how PWID who had been at involuntary drug treatment thought such experience would affect their future treatment-seeking (Phase II).

Results: In Phase I, no significant association between involuntary drug treatment and subsequent voluntary treatment-seeking was observed. Controlling for covariates, thinking that staff at treatment centers treat clients with respect significantly increased voluntary treatment-seeking (Adjusted Hazard Ratios [AHR]= 3.1; 95% Confidence Limits [CL]= 1.5-6.7). Treatment-seeking significantly decreased among those who believed it would be difficult to get into a program (AHR= 0.4; 95% CL= 0.2-0.7). Phase II showed that the pathway through which involuntary drug treatment limits future treatment-seeking is through the mistreatment, stigmatization and discrimination. However, greater need of treatment may override these conditions.

Discussion: This study highlights the complexity of factors that drive treatment-seeking behavior. Policy implications include primarily the professionalization of treatment providers and oversight of addiction treatment agencies.

KEYWORDS: People who inject drugs; treatment-seeking behavior; mixed methods; Cox model; involuntary treatment; cohort study; Tijuana

INTRODUCTION

In Mexico, according to the 2011 National Addictions Survey, 0.7% (1.3% men and 0.2% women) of the general population has a substance use disorder requiring specialized treatment.[1] Nationwide, treatment options include (1) over 400 outpatient public centers, 30 public inpatient units, (2) professional private residential centers, which

tend to be expensive, and (3) over 20,000 residential mutual aid groups that use the 12-step model of Alcoholics Anonymous (AA).[2] Although government and private treatment programs exist in Mexico, the federal government lacks infrastructure and human resources to treat most of the people with severe substance use disorders.[3]

The National Commission against Addictions (*Comisión Nacional Contra las Adicciones*; CONADIC) is the public entity in charge of the oversight of drug treatment centers which certifies public and private professional drug treatment and drug centers, making sure they provide adequate living conditions, food, treatment plans, adequate human resources and infrastructure.[4] Because CONADIC does not have the human and financial resources to certify all treatment centers, most treatment centers remain unregistered.[5] Nationally, approximately 38,000 drug users are being treated at a given time in unregistered residential centers.[6]

In the state of Baja California, there were approximately 6,984 people in residential drug treatment in 2011,[7] of whom 57.4% sought treatment voluntarily, 40.5% were taken by friends or relatives to the treatment center (coerced but not legally forced) and the rest (2.1%) were legally mandated.[8,9] Between 2009 and 2012, 5,302 people were mandated to treatment, making Baja California the Mexican state with the highest proportion of legally mandated (68% of the national total) and completed treatment.[10]

Tijuana, Baja California, is situated on a major drug trafficking route that has historically suffered from violence, which intensified in 2008 when rival cartels fought for domination of the area.[11,12] Tijuana's casinos, bars, and commercial sex work industry has long attracted persons from the U.S. [13,14]. In an effort to "clean up" Tijuana's image and increase security, a federally-funded policing program, *Tijuana Mejora*, was

implemented in the canal of the Tijuana River, a zone widely known as a hot spot where people who inject drugs (PWID) and other stigmatized populations lived.[15] It was estimated in 2012 that, at any one time, there were between 700 and 1000 people living in the canal, mostly men who had lived there for more than one year, and most of whom were active drug users.[15] This program was unprecedented in terms of coordination between federal and local law enforcement agencies. The explicit goals of the *Tijuana Mejora* program were to: (1) "revitalize" the canal and (2) relocate of homeless people to their states of origin or admit them into rehabilitation centers. *Tijuana Mejora* resulted in the displacement of approximately 800 people who were involuntarily taken by police officers to treatment centers.[16-19]

The use of involuntary drug treatment in Mexico should be placed in a global context. Internationally, to be ethical, treatment for drug dependence must involve the patient's consent, although some countries do allow involuntary drug treatment as part of criminal justice diversion or other programs including the United States,[20] Russia,[21] Brazil,[22] Peru[23] and Thailand.[24] Medical involuntary drug treatment is considered a valid 'last resort' response to prevent greater harm.[25] However, evidence suggests that drug treatment is also commonly mandated without it being the last option, which is a violation of patients' human rights,[26,27] and is contrary to international human rights agreements and ethical medical standards.[28,29]

In recent years, some Mexican treatment centers, including centers in Tijuana, that have derived from the mutual aid model have been exposed as both physically and verbally abusive towards their clients.[6] People who have been in some of these centers have reported being chained, kicked, beaten, locked-up, handcuffed, used as forced

labor, suffered verbal abuse, and restricted from family visits.[6,30-32] They have also reported being raped and starved; sometimes they do not know how long they will be detained at the center and can be forced to live in these conditions for over a year; suicides have been known to occur.[6,30-32] These conditions are obviously detrimental to health and well-being, especially if people are involuntarily detained at these centers. For this, it is important to determine whether involuntary drug treatment affects subsequent voluntary treatment-seeking.

We undertook the present study in order to examine the association between involuntary drug treatment and subsequent treatment-seeking. To our knowledge, there is no previous study investigating the role that involuntary drug treatment has on subsequent voluntary drug treatment. We posited that quantitative studies may be insufficient to describe the intricate association that involuntary and voluntary drug treatment may have, since structured surveys do not allow participants to expand on the lived experiences of involuntary drug treatment and the sequelae it may have regarding attitudes towards and practices surrounding treatment. As such, the aim of this mixed methods study was to determine whether involuntary drug treatment experiences affect subsequent voluntary drug treatment enrollment among PWID in Tijuana. We hypothesized that any voluntary treatment will be significantly lower among people who have experienced involuntary treatment, compared to those with no involuntary treatment experience.

We applied structural violence as our analytic lens. The study of structural violence describes “the social structures characterized by poverty and steep grades of social inequality… Structural violence is violence exerted systematically—that is, indirectly— by

everyone who belongs to a certain social order […] Structural violence informs the study of the social machinery of oppression. Oppression is a result of many conditions, not the least of which reside in consciousness".[33] Structural violence is embodied as adverse events, such as involuntary drug treatment, illness, stigmatization, and even psychological terror, is the experience of people who live in poverty".[33]

METHODS

This study used an embedded mixed methods design[34] in which qualitative data collection was embedded within a larger quantitative prospective cohort study, *El Cuete IV*. As our primary outcome of interest, we documented treatment behavior at baseline and during subsequent bi-annual study visits. This data allowed us to determine whether involuntary drug treatment experiences negatively affect subsequent voluntary treatment enrollment among PWID in Tijuana, Mexico. The qualitative data was embedded in the parent study during data collection for the purpose of understanding the complexities of the involuntary treatment experience.

Following Creswell and Plano Clark,[34] we define mixed methods as "a research design that collects and analyzes persuasively and rigorously both quantitative and qualitative data". For this, we combined the two forms of data by merging them sequentially, giving equal priority to both sources of data. We used quantitative and qualitative data in a single study framed within structural violence theory that combines both procedures into the research study. The rationale for mixing both types of data is that neither quantitative nor qualitative methods are sufficient by themselves to capture

the complex issue of voluntary treatment enrollment and how it may be associated with previous involuntary treatment experiences.

A cross-methodological analysis between qualitative and quantitative methods provides a unique opportunity to better understand, confirm, validate and reconcile discrepant findings in drug use research.[35,36]

Quantitative arm: Phase I

Sample

In 2011 *El Cuete* IV recruited PWID through targeted sampling, which consisted of street-based outreach in 10 neighborhoods across Tijuana.[38] Inclusion criteria comprised being 18 years of age or older, having injected drugs in the past month, speaking English or Spanish, currently living in Tijuana and with no plans to move over the next 18 months.

Procedure

All participants completed interviewer-administered surveys at baseline and every six months (13 visits at the time of the analysis) and received $20 USD per visit. The procedure used in *El Cuete* IV study have been previously described.[38] In brief, recruitment and data collection activities took place from 2011 to 2017. The quantitative survey was designed to assess HIV risk behaviors, drug use and environmental context.[38] The study protocol was approved by the Human Research Protections Program of the University of California, San Diego and by the Ethics Board at El Colegio de la Frontera Norte. The parent study collected data from 735 PWID at baseline. This analysis included

participants that reported no drug treatment (i.e., voluntary and involuntary, inpatient and outpatient) experience at baseline (n=359).

Measures

Voluntary drug treatment

The dependent variable of interest was a dichotomous variable we created based on three questions: (1) "*During the past 6 months, have you received any type of professional help for your use of alcohol or drugs? By help I mean a rehabilitation center, methadone or other medication use, or any other type of program or meeting that helps you reduce or stop your alcohol or drug use*"; (2) "*In the last 6 months, have you enrolled in a rehabilitation center? By rehabilitation center, I mean a place where you went and stayed overnight for help with your drug or alcohol problems*"; and (3) "*The last time you enrolled in a drug rehab center over the last 6 months, did you go voluntarily to this most recent rehab center?*" (Figure 4.1).

Involuntary drug treatment

The main independent variable was involuntary drug treatment, which was a dichotomous variable, in which a negative response to "*The last time you enrolled in a drug rehab center over the last 6 months, did you go voluntarily to this most recent rehab center?*" was coded as "1". The "0" coded was created with the negative responses to (1) "*During the past 6 months, have you received any type of professional help for your use of alcohol or drugs? By help I mean a rehabilitation center, methadone or other medication use, or any other type of program or meeting that helps you reduce or stop your alcohol*

or drug use"; and (2) "*In the last 6 months, have you enrolled in a rehabilitation center? By rehabilitation center, I mean a place where you went and stayed overnight for help with your drug or alcohol problems*", and the positive response to "*The last time you enrolled in a drug rehab center over the last 6 months, did you go voluntarily to this most recent rehab center?*"

Covariates

Based on findings of Phase II, we selected other covariates, including: perceived need of drug treatment, beliefs and attitudes towards drug treatment, years since first injection (i.e., subtraction of the current age minus age at first injection), daily frequency of injections, and sociodemographic factors (i.e., age and sex). Perceived need of treatment was assessed with the question "*To what extent would you say that you currently need help for your drug use?*", which was answered in a Likert scale from 0-4 that goes from "*no need*" to "*urgent need*". We created a dichotomous variable by collapsing answers corresponding to "*no need*" *vs*. "*any need*".

Beliefs and attitudes towards drug treatment included: (1) more disadvantages than advantages, (2) difficulty entering into treatment, (3) fear of withdrawal, (4) risk of violence, (5) affordability of treatment, (6) reduced risk of getting arrested, and (7) staff treats users with respect. These beliefs were assessed with the following statements: "*There are more disadvantages than advantages to drug treatment*", "*When I think about going into drug treatment, I think it would be difficult get into a program*", "*When I think about going to drug treatment, I am worried about having to experience drug withdrawal*", "*Going to drug treatment puts me at risk for violence*", "*Drug treatment is too expensive*",

"*Going to drug treatment reduces my risk of getting arrested by the police*", and "*The people who work at drug treatment programs treat their clients with respect*". All beliefs/attitudes were answered in a Likert scale from 1-6 that goes from "*Strongly disagree*" to "*Strongly agree*". With each of the statements, we created dichotomous variables collapsing answers 1-3 as "*Disagree*" and 4-6 as "*Agree*".

For treatment need and beliefs/attitudes towards drug treatment, we created a measured score from 0-1 calculated from the division of number of "yes" answers (i.e., one) by the number of times the participant responded each question from baseline to visit 13 (i.e., non-missing data).

Daily frequency of injection, an indicator of addiction severity, was a continuous variable created from the sum of all the reported injections per drug (i.e., heroin, methamphetamine, and cocaine) or drug combination (i.e., any combination between heroin, methamphetamine and cocaine) per day at each visit. At each visit, we excluded those participants who reported no injection in the past 6-months. Then, we calculated the mean number of injections per day before voluntary treatment.

Statistical analyses

We calculated frequencies and medians for the outcome and independent variables. For non-time dependent variables, we obtained descriptive statistics from baseline data. For time-dependent variables we calculated descriptive statistics based on all the available responses from baseline to visit 13 (2011-2017). For example, we obtained the mean for "*there are more advantages than disadvantages*" by dividing the number of positive answers by the number of times the participant responded that

question from baseline until the time of voluntary treatment or the last visit with a response to this question in case there was no voluntary treatment.

We included a discrete time variable with data from baseline to visit 13 to estimate the probability of attending any voluntary drug treatment. Univariate Cox regression models[39] were constructed to identify the factors related to voluntary drug treatment among those with no voluntary or involuntary treatment history prior to the beginning of the study. Because of the longitudinal nature of the study, the dependent variable and main independent variable are not correlated. We used the counting process method for the incorporation of time-dependent variables into Cox proportional hazard modeling.[40] To identify variables independently associated with voluntary entry to any drug treatment, we entered variables significant at the $p < 0.10$ level in the univariate analyses into the multivariable analysis.

Qualitative arm Phase II

Sample

For the qualitative arm, participants were purposively selected from the parent study on the basis of experience of involuntary drug treatment. During the time of the *Operativo* and about a year after it occurred, participants were systematically asked whether they had been taken involuntarily to drug centers by the police between December 2014 and March 2015. This period corresponded to the visits 5 to 8.

Between December 2015 and April 2016 we interviewed 25 (15 women and 10 men) *El Cuete* IV participants who agreed to share their experience on involuntary drug treatment. As part of our study protocol, they were asked to provide verbal consent, which

was tape recorded along with the interview, no names were recorded. Participants gave oral consent and were informed on the confidentiality and anonymity of the interview. At the end of the interview, participants received $20 USD as compensation.

Measures

The interview guide with 21 questions was designed to specifically document participant experiences at involuntary drug treatment centers in the context of the *Tijuana Mejora* program. It covered the circumstances of admission into the drug centers, daily-life conditions while detained in these drug rehabilitation centers, and the conditions of discharge and potential relapse to drug use (Appendix C).

Procedure and analysis

To improve study rigor, (1) the first author developed early familiarity with the context of the participants through fieldwork and volunteering at a free wound clinic; (2) during the interviews, there was iterative questioning in the data collection dialogues; and (3) we examined previous research on drug treatment and on PWID in Tijuana to frame findings.[41]

We used an inductive approach to thematic analysis,[42] and for this paper, we identified the data that specifically referred to potential subsequent treatment-seeking after the involuntary drug treatment experience. All interviews were conducted and transcribed by the first author, which were then printed and read. After reading all the interviews once and after initial coding was done, each interview was independently analyzed. A second coding was done also by CR to identify codes across PWID

responses and categorized according to commonalities in the themes. The analysis was performed in the language in which the interview had been conducted (either English or Spanish at the participant's preference). Interviews were recorded and transcribed verbatim for analysis; all files were kept in an encrypted computer and de-identified from the rest of the *El Cuete* IV data.

RESULTS

Phase I

Phase I had a baseline sample of 359 PWID which included 146 (40.7%) women and 213 (59.3%) men (Table 4.1). The median age was 37 (Interquartile Range [IQR]= 31-44) and the median age at first injection was 16 (IQR= 7-23). During the period of observation (i.e., 2011-2017), 44 participants (12.3%) reported recent involuntary drug treatment (90.9% 12-step based, 6.8% religious based, and 2.3% other), and injecting a median of 3.5 (IQR= 2.5-5.1) times per day. The highest ranked concern towards drug treatment was to be worried about withdrawal symptoms, which in a scale from 0 to 1, had a median score of 0.91(IQR= 0.73-1.00).

There were 135 participants (37.6 %) with at least one voluntary drug treatment experience since their baseline visit (Figure 4.2). Table 4.2 shows the results of survival models that estimate differences in recent voluntary drug treatment. In the univariate analyses, we did not find a significant association between a history of involuntary drug treatment, the main independent variable, and subsequent voluntary drug treatment, the outcome variable (Hazard Ratio [HR]= 1.2; 95% Confidence Limits [CL]= 0.7-1.9).

Covariates significantly associated (at $p<0.10$) with voluntary treatment-seeking were daily injection frequency (HR= 1.1; 95% CL= 1.0-1.1), perceived treatment need marginally (HR= 2.3; 95% CL= 1.1-4.8), and thinking that the staff at drug treatment treat clients with respect (HR= 4.5; 95% CL= 2.0-10.3). Conversely, the hazard was lower for those who thought that drug treatment is too expensive (HR= 0.3; 95% CL= 0.1-0.5), that drug treatment puts users at risk of violence (HR= 0.4; 95% CL= 0.2-0.7), and that it would be difficult to get into a program (HR= 0.2; 95% CL= 0.1-0.3). There were no significant associations between voluntary drug treatment and sex, age, years since first injection, thinking that there are more advantages than disadvantages to drug treatment, thinking that drug treatment reduces risk of getting arrested, and worry about withdrawal.

After adjusting for covariates that were significant in the univariate analysis, the multivariable analysis revealed that involuntary treatment was not significantly associated with voluntary treatment enrollment. Thinking that staff at drug treatment treat clients with respect remained significantly positively associated with voluntary treatment-seeking (Adjusted Hazard Ratio [AHR]= 3.1; 95% CL= 1.5-6.7); and thinking that it would be difficult to get into a program was significantly negatively associated with voluntary drug treatment-seeking (AHR= 0.4; 95% CL=0.2- 0.7).

Phase II

The subsample (n=25) included in Phase II had a median age of 41 years (IQR= 37-47), a median of 19 years since first injection (IQR= 14-26), and about 31% (n=11) of the participants had been at least once in a drug center before the *Operativo*. During the *Operativo*, 20 participants were involuntarily taken to drug centers once, 4 participants

twice, and one participant three times. All participants were taken to 12-step based drug centers.

Contrary to what we found in the multivariable analysis, the qualitative findings revealed that most of the sample considered that the involuntary drug treatment experience was having a subsequent negative effect on treatment-seeking that acted as a barrier to future treatment. Most of the participants affirmed that they were both mistreated by the *servidores* and that they had experienced violence in the form of physical punishments. A typical statement was made by a 48 year old woman who affirmed that in the future, she would not voluntarily seek treatment. She specifically stated that *"… there is no way I'm going back to a center, it's too scary*", and that she would eventually like to stop using drugs but that she will decide when and how to do it. What she referred to as "scary" was further clarified by other participants, and it was related to the inadequate living conditions, overcrowding, and punishments carried out by *servidores* (people who previously used drugs who entered the drug centers as interns and who after their treatment was successful volunteer their *service* to the center) at the drug centers. Interestingly, in contrast to the quantitative findings, in the interviews the avoidance of withdrawal symptoms was reported as a major barrier for future treatment-seeking. For instance, a 50 year old man stated that he would consider treatment only if he would be able to avoid withdrawal symptoms due to his experience with withdrawal during involuntary treatment. This illustrates the 'pathway' in which involuntary drug treatment is limiting future treatment-seeking.

Phase II contributed to the understanding of the quantitative data provided by the multivariable model in Phase I. While most reported negative treatment experiences, this

was tightly related to the fact that they were all taken involuntarily to drug treatment. Participants suggested that “interns” at the drug centers, who were taken by their relatives or who had voluntarily sought treatment, had better living conditions. This included better or more food, a bed, less frequent punishment, and some even received benzodiazepines to help relieve withdrawal symptoms. Participants who have had prior voluntary treatment experiences also affirmed they received a better treatment when they voluntarily sought treatment. It may therefore be that regardless of the involuntary treatment experience, the expectations of being treated adequately and with respect are some of the most important factors to enroll into a drug treatment. Having witnessed or experienced themselves a different, better, type of treatment in these centers, might encourage them to consider treatment, despite the negative experience of involuntary treatment.

Phase II data also provided a better understanding of the lack of association between voluntary treatment-seeking and treatment need in the multivariable analysis. On one hand, some participants stated that they were “*tired of using drugs*” and felt “*completely despaired and hopeless*”. These participants may be aware of their need of treatment but are in such despair that their awareness does not contribute to voluntary treatment-seeking. On the other hand, other participants said that despite their treatment need, drug treatment was not effective for them, although it may be for others.

Finally, other participants had additional or different concerns which overrode their concerns about intolerable conditions and mistreatment. For example, one 39 year old woman commented that she would voluntarily enroll to a drug center but that she was hesitant because she needed to take care of her elderly mother and could not leave her alone. Another 48 year old woman stated that she would only enroll in treatment if she

was allowed to leave voluntarily. It seems that both women were willing to accept the living conditions of the drug centers if they offered a more flexible inpatient treatment option.

DISCUSSION

In this study of voluntary treatment-seeking we found that more than one third of PWID in Tijuana who had no prior treatment experience voluntary attended treatment over a 6-year period. This study hypothesized that participants who had experienced involuntary drug treatment would be significantly less likely to attend any drug treatment voluntarily during the period of observation. The hypothesis was not confirmed through the quantitative data. However, qualitative arm showed that, overall, those who had been in involuntary drug treatment reported negative experiences that they felt reduced their willingness to engage voluntarily in future drug treatment. However, our qualitative data suggested there were other factors involved in how involuntary drug treatment may affect the decision making process of seeking treatment. One possible explanation is that the occurrence of involuntary drug treatment was considered to have been a unique experience that differs from what voluntary treatment may be like. Most of the participants attributed the mistreatment they received from the drug center staff as being associated with being taken to the drug centers as part of the *Operativo*. When participants who were interviewed in the qualitative arm compared their experiences to those who were taken by their relatives or who entered voluntarily into the same drug centers, they may be willing to reconsider engaging in treatment in the future. This argument has additional support in our multivariable analysis in which we found that those who thought that staff

–*servidores*- treat clients with respect, were more likely to seek treatment compared to those who did not think they would be treated with respect. CONADIC and private institutions have recently joint efforts to work towards the professionalization of drug centers.[43] However, the gap between evidence-based treatment and the services offered at drug centers is still wide. Additionally, there is also a need for professional staff trained in substance use disorders, including psychology, medicine, nursing and social work that could be employed in such centers.

Another important finding was that participants who, during the time of study, thought that it would be difficult to get into a program, had significantly decreased likelihood of seeking treatment. This indicates that, in addition to treatment need and the context of drug use, there are structural barriers that need to be addressed through policy making and resource allocation. Drug treatment in Mexico faces several structural barriers, especially for chronic older users and even more for those with unstable housing and with more than a decade of injection drug use. Nationwide, there are limited public resources that mostly fund prevention and early intervention programs.[2] As such, most of the population in need of drug treatment seek it in private institutions that are either too expensive or which are not evidence-based programs.[2] In 2017 there were 17 in-patient centers in Tijuana recognized by CONADIC, and only one of them has evidence-based programs, including methadone for opioid use disorders.[44] Outpatient treatment available in Tijuana includes, to our knowledge, two private methadone clinics, and four public UNEME-CAPA (i.e., prevention and early intervention programs).[45] As shown in the multivariable analysis, the difficulty associated with getting into a program is not financial. This may be because public institutions subsidize healthcare through *Seguro Popular* –

the universal healthcare- for people in the lowest socio-economic status, including substance use disorders. However, evidence suggests that, even after the implementation of *Seguro Popular*, about half of the population in Mexico still lacks access to healthcare.[46] That is, the population is aware of the existence of free health services but they are still unable to seek care and the treatment provided has restrictions regarding the type of medicine or counseling provided.[47] Usually, in order to be admitted, there is a long waiting list and, more importantly, users need to have official documentation, which our sample mostly lacks.

We also found that although marginally significant at the bivariate analysis, treatment need was no longer significantly associated with treatment seeking when adjusting for other covariates. This shows the complexity of not only treatment-seeking behavior, but the challenges that people who use drugs face. Overall, participants reported some need of treatment, which indicates that there may be willingness to seek treatment if adequate services are provided. The qualitative data indicates that participants experienced considerable despair and hopelessness with respect to their drug use. It may be that while participants were aware of their need of treatment they did not think it would be effective and hence was unrelated to treatment-seeking behavior.

Nationally, in 2011 the National Addictions Survey estimated that in 2010 0.2% of the general population reported lifetime heroin use, and 0.1% last year heroin use.[1] In 2006, in a general population survey in Tijuana, 9% of those with alcohol or drug dependence had attended any treatment in the past year.[48] However, we cannot compare our data with that drawn from household survey data since PWID in Tijuana usually have unstable housing and consequently, are not part of the household survey sample

universe. To our knowledge, there is no other Mexican study with PWID with which we could compare treatment-seeking or any other behavior.

Limitations

This study has several limitations. First, our sample of PWID consists of older individuals who on average have injected mostly heroin and methamphetamine for over a decade, and had done so in an international border region noted for extreme resource disparity. As such, our findings of the experience at drug centers and involuntary treatment may not be generalizable for all PWID, either within Mexico or internationally. Second, due to limited sample size, we grouped all reasons for involuntary drug treatment experiences and it may be that there are differences depending on the nature of the involuntary drug treatment (e.g., law enforcement, family or partner). It is possible that discrepancies in the data reflect the differences between the quantitative sample and the qualitative subsample. Third, self-report may also be a limitation; however, we prioritize providing a voice to PWID in the interests of promoting social justice research in the public health realm. Finally, desirability bias may be present in participant narrations, either over-reporting or under-reporting negative experiences with involuntary treatment depending on what participants thought the interviewer wished to hear. However, the reports from this sample describing physical and verbal abuse are comparable to those previously reported in other studies of drug treatment annexes in Tijuana.[49,50]

Conclusions

Overall, this study explored how experiences of involuntary drug treatment relate to voluntary drug treatment among PWID in an under-resourced setting. The links between involuntary treatment and future treatment-seeking are complex, and enclosed in processes that include the abuse linked to involuntary treatment, but also how people respond to ideas of treatment quality and availability. Policy implications include primarily the professionalization of treatment providers and oversight of addiction treatment agencies. This includes not only the provision of evidence-based treatment, but sensitization of human rights training. Subsequently, access to different types of drug treatment that include inpatient and outpatient options are needed to cover the needs each individual may have.

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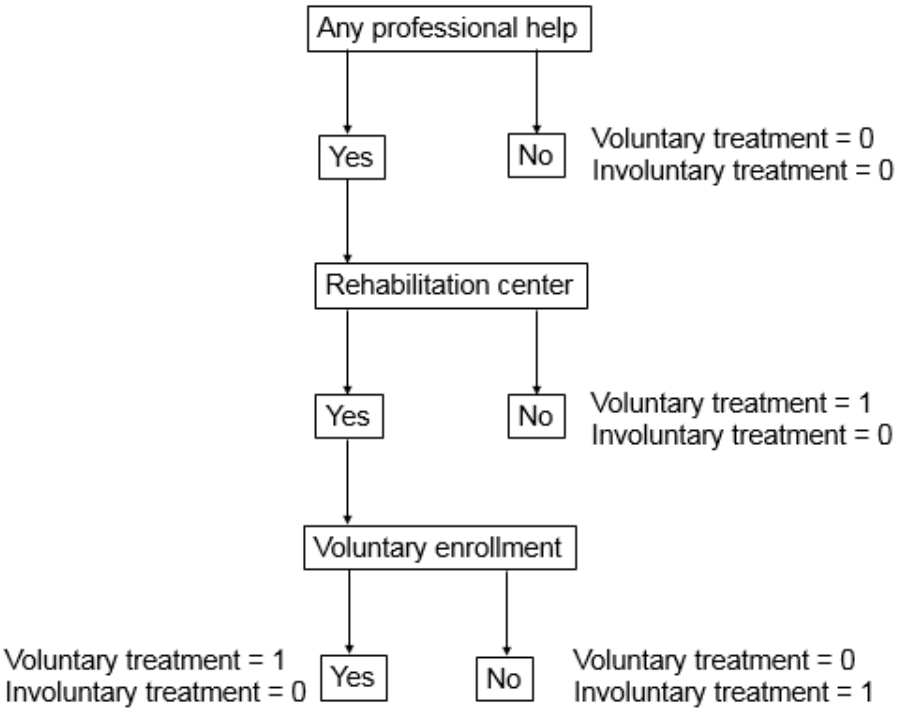

Figure 4.1 Diagram of the coding process of voluntary drug treatment (outcome variable) and involuntary drug treatment (main independent variable).
*All behaviors refer to past-6 months treatment-seeking.

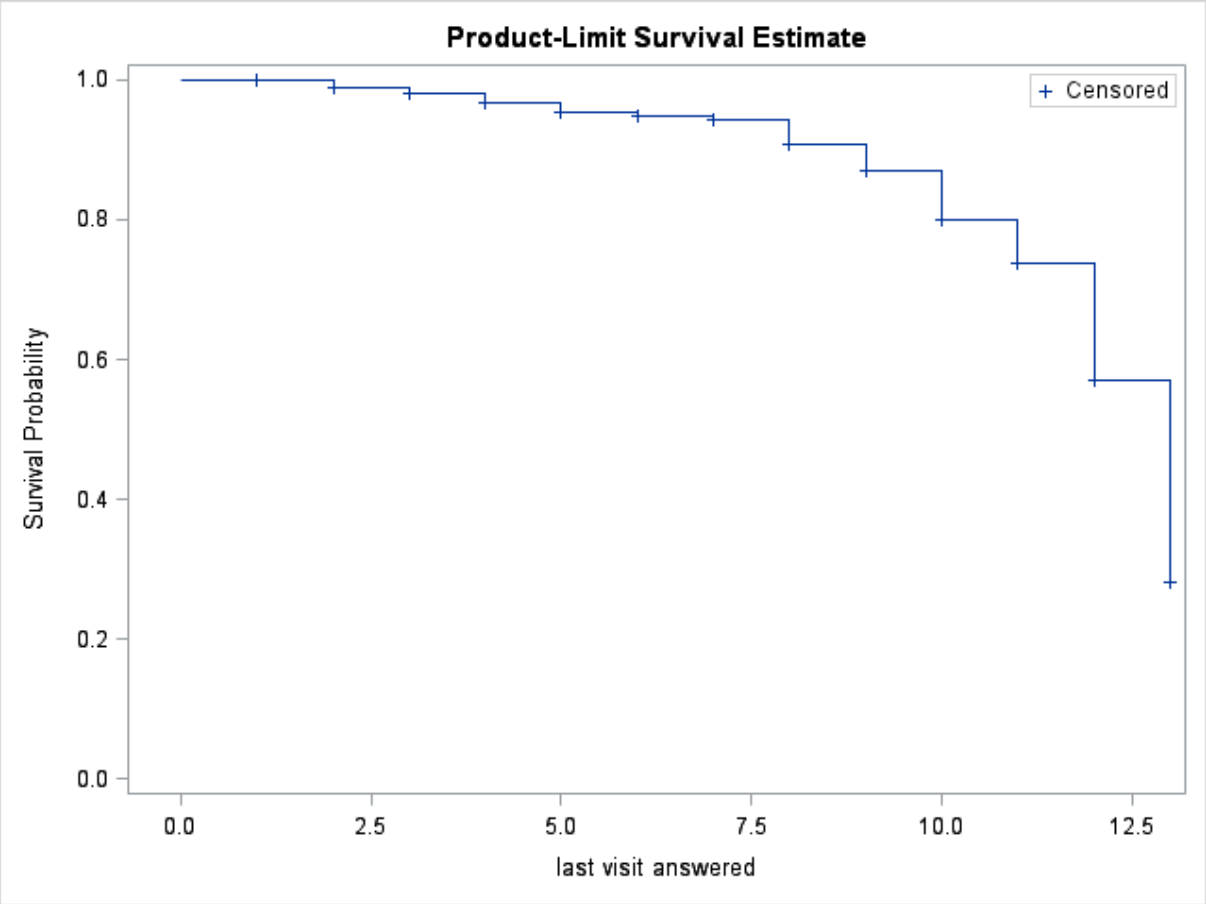

Figure 4.2 Survival curve of voluntary drug treatment among people who inject drugs in Tijuana between 2011 and 2017 (n=359).

Table 4.1 Baseline data on sociodemographic and drug-related characteristics among people who inject drugs that have never been into drug treatment. *El Cuete* IV. Tijuana, Mexico, 2011-2017 (n=359).

Baseline characteristics	**n/median**	**%/IQR**
Sex		
Women	146	40.67
Men	213	59.33
Age	37	31-44
Years since first injection	16	7-23
Time-dependent variables	**n/median**	**%/IQR**
Involuntary drug treatment[a]		
No	315	87.74
Yes	44	12.26
Daily injection frequency[a]	3.55	2.46-5.11
Treatment need[a]	0.82	0.55-1.00
Beliefs about drug treatment[a]		
There are more advantages than disadvantages to drug treatment	0.33	0.13-0.50
It would be difficult to get into a program	0.50	0.33-0.70
Worried about withdrawal	0.91	0.73-1.00
Drug treatment reduces risk of getting arrested by the police	0.77	0.63-1.00
Drug treatment puts me at risk of violence	0.50	0.33-0.69
Drug treatment is too expensive	0.60	0.45-0.77
Staff at drug treatment treat clients with respect	0.75	0.58-1.00

[a] Past 6 months. IQR: Interquartile range.

Table 4.2 Univariate and multivariable Cox model for factors related to reporting voluntary drug treatment in the past 6 months among people who inject drugs. *El Cuete* IV, Tijuana, Mexico, 2011-2017 (n=359).

Characteristics	HR	95% CL		AHR	95% CL	
Men*	1.16	0.81	1.65			
Age	0.98	0.97	1.00			
Involuntary drug treatment	1.15	0.70	1.90			
Years since first injection	1.00	0.98	1.01			
Daily injection frequency	1.05*	1.00	1.10	1.02	0.97	1.08
Treatment need	2.30*	1.12	4.76	1.68	0.84	3.36
Beliefs/attitudes about treatment						
There are more advantages than disadvantages to drug treatment	0.53	0.24	1.16			
Worried about withdrawal	1.31	0.52	3.29			
Drug treatment reduces risk of getting arrested by the police	1.83	0.77	4.35			
Drug treatment is too expensive	0.26***	0.13	0.54	0.52	0.24	1.14
Staff at drug treatment centers treat clients with respect	4.51***	1.97	10.34	3.14**	1.48	6.66
Drug treatment puts me at risk of violence	0.36**	0.19	0.68	0.70	0.37	1.30
It would be difficult to get into a program	0.19***	0.09	0.38	0.36**	0.18	0.72

Reference: women. HR: Hazard Ratios; 95% CL: Confidence Limits; AHR: Adjusted Hazard Ratios. *p<0.10; p<0.05; p<0.0001.

CHAPTER 5: DISCUSSION

This dissertation found that involuntary drug treatment had a detrimental effect on the health and wellbeing among people who inject drugs (PWID) in Tijuana, Baja California, Mexico. Involuntary drug treatment, mediated largely through an intensified policing program, acted as a mechanism of disciplinary power inflicted by the State in an already structurally-violent context (Aim 1). Involuntary drug treatment was significantly associated with non-fatal overdoses (Aim 2). Although not quantitatively associated with subsequent voluntary treatment-seeking behavior, qualitative findings implicate involuntary drug treatment as a barrier through the mistreatment of clients that participants felt was perpetrated by *servidores* (Aim 3). The following sections of this chapter discuss key findings, strengths and limitations of the research and implications for future research and drug treatment policies.

SUMMARY OF KEY FINDINGS

Chapter 2 indicated that disciplinary power was the prevalent mechanism of power at drug centers where PWID were detained through the federally funded security *Operativo, Tijuana Mejora* (Aim 1). The uncertainty and fear experienced by participants when they were involuntarily taken to treatment centers took place in a frequently violent context in which PWID were supposed to improve their health during drug detoxification. Qualitative findings indicate that people taken to the treatment centers were rarely screened or selected based on an objective measure; instead they were selected based on their poor physical appearance. Once at drug centers, these *Government Requested*

users were discriminated against and stigmatized, stressing the structural violence lived in the streets. Regardless of this violence, the main complaint made by participants was the lack of State oversight of the drug centers.

Chapter 3 assessed the effect of involuntary drug treatment on non-fatal overdose (Aim 2). Logistic regression using generalized estimating equation analyses was conducted on reported recent non-fatal overdose event and involuntary drug treatment. Over a period of 6 years, one third of participants suffered at least one non-fatal overdose and 15% were taken involuntarily to drug treatment. As hypothesized, there was an association between involuntary drug treatment and non-fatal overdose, even after controlling for sex, age, injection frequency and number of times injecting per day. Non-fatal overdose was also independently associated with injection frequency and it decreased with age. This chapter highlighted the life-threatening risks PWID experience associated with involuntary drug treatment. Policy implications included the need for government actors to ensure that PWIDs have the right to choose the timing and circumstances of their treatment, the need for treatment staff training in overdose prevention at drug treatment centers, and the need for patients' education on risks, resources and treatment options upon release.

Chapter 4 explored whether involuntary drug treatment experiences affect subsequent voluntary drug treatment enrollment among PWID (Aim 3) through a mixed methods analysis. In the quantitative phase (Phase I), Cox regression was conducted to identify the factors related to "any voluntary drug treatment" in the past six months among those with no prior voluntary or involuntary treatment history at baseline. A subsample of 25 participants was interviewed to explore how PWID who had received involuntary drug

treatment thought such experience would affect their future treatment-seeking behavior (Phase II). In Phase I, no significant association was observed between involuntary drug treatment and subsequent voluntary treatment-seeking. However, perceiving that treatment center staff treat clients with respect was independently associated with a three-fold higher rate of seeking voluntary treatment. Treatment-seeking significantly decreased among those who believed it would be difficult to get into a program. Phase II suggested that the pathway through which involuntary drug treatment limits future treatment-seeking is through mistreatment, stigmatization and discrimination. However, participants who experience great treatment need may oversee these harmful conditions. This study highlights the complexity of factors that drive treatment-seeking behavior in settings which implement both voluntary and involuntary treatment. Policy implications include primarily the need for greater professionalization of treatment providers and oversight of addiction treatment agencies.

STRENGTHS AND LIMITATIONS

Generalizability: Our sample of PWID in Tijuana is characterized by chronic heroin and methamphetamine use in the context of poverty living adjacent to one of the most inequitable international borders. As such, our findings of PWIDs' experience at drug centers and involuntary treatment may not be generalizable to all PWID in Mexico or internationally. However, we took advantage of a unique opportunity to analyze a public security measure that violated human rights among one of the most vulnerable populations in the Mexico-U.S. border region.

Lack of psychiatric diagnoses: The parent study did not include mental disorders scales at baseline that may had uncovered personality traits related to substance use. It is possible that participants with comorbid mental health disorders were more likely to be involuntarily taken to treatment centers during the *Operativo* and consequently, to be interviewed in the qualitative arm. If that were the case, it is likely that the accounts of discrimination and stigmatization would be permeated by the additional discrimination that people with mental health disorders have. However, we did not find a major difference in the accounts of the 4 participants with psychiatric or physical impairments. On the contrary, the inclusion of people that had psychiatric disorders enriched the qualitative data we were able to collect and analyze. In terms of the impact on the quantitative data, it is possible that participants' treatment need varies depending on their level of insight or capacity to objectively assess their situation. As such, it is possible that participants with psychiatric disorders may have underestimated their drug treatment need and consequently underreported it.

Self-report: Self-report was a limitation that may interfere through inaccurate data, and underreporting. In Chapters 2 and 4 participants were asked to describe their experience at involuntary drug treatment centers, which could be subject to recall bias. However, we prioritized giving voice to PWID in their experience of involuntary treatment, and the reports of this sample on physical and verbal abuse are comparable between participants and comparable to what others had previously reported from studying annexes.[1,2] In Chapter 3, participants were asked every 6 months to recall their non-fatal overdose experiences, which may also be underreported. However, studies with PWID have found that self-report is as reliable as urine analysis, especially when measuring

other risk behaviors.[3] Chapter 4 asked participants to discuss whether they would voluntarily seek drug treatment in the future, which should be free of recall problems.

Social desirability bias: Participants may have responded to the surveys and the interviews according to what they considered the interviewers expected or wanted to hear. It is possible that participants stressed their negative experiences at involuntary drug treatment during the qualitative interview, used in Chapters 2 and 4, assuming that was what the interviewer was looking for. However, I have had previous training as a clinical interviewer in the Mexican context. The quantitative survey of the parent study, used in Chapters 3 and 4, was administered by trained staff that has worked with PWID for several years. The professionalization of interviewers was an attempt to minimize social desirability bias by creating a comfortable and safe environment for the participants.

Differential misclassification[4] bias: It is also possible that some PWID who reported having been in drug treatment voluntarily may have been coerced into agreeing to go into treatment or vice versa, and therefore we would be underestimating or overestimating the proportion of PWID forced into treatment.

Due to limited statistical power, we grouped all the involuntary drug treatment experiences and it may be that differences exist depending on the nature of the involuntary drug treatment (e.g., law enforcement, family or partner). However, people that are taken involuntarily to treatment by their relatives go to the same centers in which law enforcement officers involuntarily detain users.[5]

Loss to follow up bias: It is possible that participants that were lost to follow-ups had different outcomes in non-fatal overdose rates and voluntary treatment-seeking. It is

possible that participants lost to follow-up were involuntarily taken to treatment, went voluntarily to treatment, or died. All of these possibilities would directly affect the outcomes of Chapters 3 and 4. However, longitudinal analyses are preferred over cross-sectional analyses to elucidate the temporal associations between the variables.

Contribution to global health research

Findings highlight that involuntary drug treatment that forces people into abstinence in a secluded context are a violation of human rights and have a negative health impact on PWID, specifically on overdose risk and as a barrier for future treatment-seeking. In Mexico and internationally, there is an urgent need for evidence-based drug policies that respect the rights of people who use drugs.[6] Globally, different modalities of involuntary drug treatment may contribute to the burden of preventable morbidity among PWID. Legal coercion and quasi-legal coercion (e.g., through employment-based programs) has been described internationally, mainly in English-speaking countries,[7] but also in China, Malaysia, Cambodia, Vietnam and Thailand.[8] This dissertation contributes to the knowledge of non-legally based involuntary drug treatment, which is common throughout Latin America.

Drug treatment centers must improve, rather than undermine the health of the users, included those admitted involuntarily. As in Malaysia, where detention centers have been substituted for voluntary drug treatment centers,[6] Mexico will not only need more voluntary drug treatment centers but surveillance and evaluation of effectiveness and coverage of treatment needs being met. In Thailand there was also a change in the law that classified substance use as a health issue and as such, people who use drugs

were considered patients.[9] Drug detention centers, created and run by the government, are mainly therapeutic communities characterized by a boot-camp emphasis.[9] In the sample of this study, there were no reports of physically exerting, 'boot camp' efforts but rather of physical and psychological punishments and stigmatization. In addition, it is possible that in Mexico the association between healthcare and involuntary drug treatment is more complex than in countries like Thailand[10] and Malaysia[6] because people that seek treatment voluntarily are usually admitted into centers where involuntary drug treatment is also provided. As such, tensions between *interns* may add to the already complex pathway of voluntary treatment-seeking.

Health policy impact

This dissertation research used the analytic lenses of disciplinary power[11] and structural violence.[12] As such, the findings provide necessary public health information regarding potential consequences of involuntary drug treatment among PWID in the context of a public security program, which acted a social determinant of health.[13] Data obtained from this study identified that security measures that coerced PWID into treatment did not necessarily translate into improvements in their health and wellbeing; involuntary drug treatment through a policing program acted as a control measure. As such, the opportunity to provide healthcare was lost and PWID that were exposed to this stigmatizing intervention continued their drug injecting trajectory. Policing measures that ought to control PWID should not be disguised as a health intervention so that PWID do not associate such a negative experience with the health system and with the process of seeking care.

The findings of this dissertation show that all PWID in the sample that have had involuntary treatment experiences have been taken to mutual aid and religious centers. According to the NOM-028, involuntary drug treatment should only be provided under medical supervision.[14] As such, this dissertation exposes that in Tijuana, detention of PWID at treatment centers is routinely done without due process. The mechanisms in which involuntary drug treatment is legal in Mexico are not being sufficiently supervised. *Tijuana Mejora* did not protect the human rights of PWID, it did not include screening for substance use disorders, it did not provide basic healthcare and it was not tailored to the needs of the people that were involuntarily taken into drug treatment. All the above mentioned characteristics should be included, by law, when involuntary drug treatment is sought.[14]

Additionally, there is an imperative need for an overdose prevention programs in Mexico, which could include the evidence provided in Chapter 3 on the significant association between involuntary drug treatment and non-fatal overdose. Considering the current opioid epidemic in the United States, the need of overdose prevention is even more important in border cities such as Tijuana, where the opioid epidemic is likely to expand. Currently, most of the financial and human resources are focused on prevention of drug use, which is adequate for the needs of the general population.[15] However, the lack of overdose prevention programs and research is leaving people who already use drugs with no resources to learn how to prevent or reverse overdoses.

It is recommended that treatment centers certified by CONADIC include an overdose prevention component in their treatment programs. Overdose prevention programs may include educational materials to prevent and respond to an overdose,

discussions on previous experiences with overdose or witnessing and overdose, and the use of naloxone, among others.[16] It is possible that centers that are based on the 12-step model may refuse this suggestion. However, CONADIC, as part of the Secretariat of Health, may be able to require evidence-based training to treatment centers so there is an acknowledgement of the likelihood of relapse among people who use drugs.[17,18] A harm reduction perspective is greatly needed, which includes meeting people who use drugs at the treatment stage they are currently in.

This dissertation also exposed the opportunity to increase treatment-seeking through the training of drug centers' personnel –*servidores*- in regards of a more humane and respectful behavior towards their clients. Current efforts to promote an evidence-based treatment in Mexico include the Training and Certification Program for Drug and Violence Prevention, Treatment and Rehabilitation.[19] Also, recently, a psychoeducational and training program was developed for non-specialized health professionals.[20] However, there are still two major gaps in the knowledge. First, both training programs are yet to be evaluated. Second, there is still a lack of interventions that target the specific needs of PWID. Hence, more education into evidence-based treatment, harm reduction and human rights is greatly needed at drug centers.

Our study provides data supporting the implementation of evidence based harm reduction practices instead of reinforcing involuntary treatment policing practices embedded in security policies (just as the *Operativo* in Tijuana) in other regions of Mexico. This dissertation contributes to the already existing data that suggest that involuntary drug treatment contradicts harm reduction policies.[21] It also provides useful information for the

ongoing implementation of the law that regulates treatment centers in Mexico (NOM-028),[14] specifically for PWID, who are likely to face more vulnerable health conditions.

DIRECTIONS FOR FUTURE RESEARCH

A holistic overdose prevention program cannot be done without more research on overdose among the general population. A pilot study found that there may be more cases of non-fatal and fatal overdose among people higher socio-economic status than among the impoverished sample used in this dissertation.[22] Also, more research in other Mexican settings is needed to determine the needs of other PWID in a non-border context. Heroin and methamphetamine consumption has been considered a border health concern,[23] however, its use has been reported in other parts of Mexico recently.[24] As such, research focused on injection drug use is needed in other Mexican regions. Also, more research is needed to determine the drug treatment and other health programs that may improve the quality of life of people with chronic injection drug use.

CONCLUSIONS

In Chapter 2, involuntary drug treatment was explored in the context of a policing program that acted as a mechanism of disciplinary power. Drug centers lacked State oversight, and PWID were discriminated and stigmatized and their health needs were unmet. In Chapter 3, PWID that had experienced involuntary drug treatment were more likely to suffer a non-fatal overdose. In Chapter 4, the complex pathway in which involuntary drug treatment may act as a potential barrier for voluntary treatment-seeking was explored. Overall, this dissertation provided an insight of how health, wellbeing,

human rights, dignity, and security of people who use drugs ought to be at the center of drug policies included in universal health care systems.

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APPENDIX A. 12 STEPS OF ALCOHOLIC ANONYMOUS

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God, as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these Steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs.

APPENDIX B. SELECTED REQUIREMENTS OF RESIDENTIAL TREATMENT CENTERS. CONADIC, 2009

Treatment services specialized in addictions with residential facilities must:

1. Be registered in CONADIC
2. Have a work plan approved by CONADIC, which should include medical and or psychosocial treatment based on scientific, social and ethical principles
3. Have guidelines for their employees
4. Have technical and administrative manuals
5. Count with a reference and counter-reference guidelines
6. Have adequate infrastructure and equipment required for the type of treatment provided
7. Facilities adapted to the type of population admitted (e.g., children, adolescents, adults, elderly, disabled people)
8. Have trained and sufficient personnel
9. Provide holistic attention to the users, which should include: adequate, clean and safe physical environment, medical and/or psychosocial treatment, balanced nutrition served in hygienic conditions and based on the health of the users, motivation for the active participation in the users' treatment. In addition, the personnel is obliged to protect, take care and provide safety to the users, the relationship between the personnel and users should be based on respect of civil and human rights. The service should also provide the opportunity to family member of give suggestions and complaints and promote the active collaboration

of the users' family in the treatment process. Services must inform, prior admission, of direct and indirect costs of treatment, as well as its length to the family members and any other person that requires that information. All administered medication must be prescribed by a physician, and in case the user has an existing prescription when admitted to the center, the physician in charge of the facilities must administer the medication. All the information provided by the users is confidential, the treatment process will not be disclosed to any individual or authority except when legally mandated. There will be no recording or photographing of the treatment process. In case of emergency, the center must have a process of reference approved by CONADIC. The work plan of the residential center must include specific information on the rehabilitation activities and the interdisciplinary participation of health professionals and the user's family.

10. Monthly notify to the System of epidemiologic research and vigilance in addictions (SISVEA) of the admissions and general information of the users, which will not include their names.

APPENDIX C. QUALITATIVE INTERVIEW GUIDE FOR THE STUDY OF THE IMPACT OF INVOLUNTARY DRUG TREATMENT AMONG PEOPLE WHO INJEC DRUGS IN TIJUANA

Could you please tell me would do you consider as involuntary drug treatment?

PRE-TREATMENT

1. Tell me the story of how things were before you entered to treatment.

TREATMENT EXPERIENCES

2. Tell me about the last time you were taken convinced, forced, took or coerced you into treatment? (When, where, how, were you alone, what were you doing, were you carrying syringes/drugs, were you "high"/on withdrawal, were you offered an option). Were you taken there by force? Were you allowed to leave or contact family or friends once you were there? How long were you there? Were you tied up or locked up when you were there?
3. How does that compare to any other times where you might have gone into drug treatment?
4. Who took you involuntarily into treatment? (If police, ask if it was Federal, State, Municipal; family, peers)
5. Were you considering entering into treatment before this happened? How did you imagine it would be like? Was it like you were expecting it?
6. Tell me about the people there (clients and staff).

7. Do you think this program was working for you? Why or why not? (Positive and negative experiences)
8. Did your family or friends knew you were at the drug treatment program? Were visitors allowed?
9. Did you have any health concerns while you were there? If so, what did you do about it?
10. Did people at the center experience physical abuse (being punched, kicked, slapped, beaten)? Did you experience this?
11. Did people at the center experience verbal abuse (being yelled or sworn at, being belittled)? Did you experience this?
12. Did people at the center experience sexual abuse (molested, being raped)? Did you experience this?
13. Did people at the center use any drugs? Did you participate in that? If so, can you describe the circumstances that let you to do so? Were there consequences if the center staff found out that people were using drugs there? What were the consequences?

POST-TREATMENT

14. Tell me about the conditions of your discharge? (Time in treatment, early discharge, cost of discharge, escaped vs. released, hour of release, where did the person go, was the person alone)

15. Did your drug use change in any way after treatment? How? (Injection and non-injection drug use, equipment sharing, prefilled syringes, frequency of injection and non-injection, used substances)
16. Do you know any people who had an overdose after leaving involuntary drug treatment? Did this happen to you?
17. Would you consider entering to treatment voluntarily given this treatment experience?
18. What do you think would make it easier for you to receive the treatment?
19. Tell me if you started using drugs again after involuntary drug treatment? (Time after discharge, substances, injection and/or non-injection, HIV risk behaviors; exchange of sex for drugs)
20. What could be done to improve the drug treatment? What could work for you? (Activities, type of attention, resources)
21. Would you like to say anything else about this topic?