



Research paper

The role of visual markers in police victimization among structurally vulnerable persons in Tijuana, Mexico



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ABSTRACT

Background: Law enforcement can shape HIV risk behaviours and undermine strategies aimed at curbing HIV infection. Little is known about factors that increase vulnerability to police victimization in Mexico. This study identifies correlates of police or army victimization (i.e., harassment or assault) in the past 6 months among patients seeking care at a free clinic in Tijuana, Mexico.

Methods: From January to May 2013, 601 patients attending a binational student-run free clinic completed an interviewer-administered questionnaire. Eligible participants were: (1) ≥ 18 years old; (2) seeking care at the clinic; and (3) spoke Spanish or English. Multivariate logistic regression analyses identified factors associated with police/army victimization in the past 6 months.

Results: More than one-third (38%) of participants reported victimization by police/army officials in the past 6 months in Tijuana. In multivariate logistic regression analyses, males (adjusted odds ratio (AOR): 3.68; 95% CI: 2.19–6.19), tattooed persons (AOR: 1.56; 95% CI: 1.04–2.33) and those who injected drugs in the past 6 months (AOR: 2.11; 95% CI: 1.29–3.43) were significantly more likely to report past 6-month police/army victimization. Recent feelings of rejection (AOR: 3.80; 95% CI: 2.47–5.85) and being denied employment (AOR: 2.23; 95% CI: 1.50–3.32) were also independently associated with police/army victimization.

Conclusion: Structural interventions aimed at reducing stigma against vulnerable populations and increasing social incorporation may aid in reducing victimization events by police/army in Tijuana. Police education and training to reduce abusive policing practices may be warranted.

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Introduction

Globally, law enforcement officers can aid in shaping HIV risks via policing practices for structurally vulnerable populations, including homeless persons, people who inject drugs (PWIDs), and female sex workers (FSWs) (Beletsky et al., 2013; Burris & Strathdee, 2006; Goldenberg, Strathdee, Gallardo, Nguyen, et al., 2011; Goldenberg, Strathdee, Gallardo, Rhodes, et al., 2011;

Hayashi, Small, Csete, Hattirat, & Kerr, 2013; Kerr, Small, & Wood, 2005; Miller et al., 2008; Ti et al., 2014; Ti, Wood, Shannon, Feng, & Kerr, 2013). Problematic policing practices include unjust arrests, harassment, extortion, sexual abuse, and violence. Such practices can have an indirect effect on the behaviours of structurally vulnerable populations who may engage in health damaging behaviours that increase HIV susceptibility as a strategy to remain hidden and evade police. PWIDs who experience police abuse are more likely to inject in unsafe environments (i.e., shooting galleries), rush injections, and share syringes (Beletsky et al., 2013; Burris & Strathdee, 2006; Kerr et al., 2005; Miller et al., 2008; Philbin et al., 2008; Volkmann et al., 2011; Werb et al., 2008). PWIDs may also be less likely to seek out needle exchange programs, purchase clean needles, and seek drug-treatment for fear of law enforcement (Beletsky, Agrawal, et al., 2011; Beletsky, Grau, et al.,

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2011; Burris et al., 2004; Burris & Strathdee, 2006; Miller et al., 2008). FSWs may rely on third parties (e.g., pimps, bar owners) or work in secluded areas to avoid police confrontations; these factors limit regulation and FSWs' ability to negotiate condom use and safer sexual practices (Beletsky et al., 2012; Goldenberg, Strathdee, Gallardo, Nguyen, et al., 2011; Goldenberg, Strathdee, Gallardo, Rhodes, et al., 2011). The criminal justice system can reduce adoption of preventive behaviours and influence HIV risk among structurally vulnerable persons.

Along the U.S.–Mexico border, human rights violations and accounts of victimization experiences (e.g., abuse, violence) by law enforcement are commonplace (Beletsky et al., 2012; Philbin et al., 2008; Pollini et al., 2008; Pollini, Gallardo, et al., 2010; Pollini, Lozada, et al., 2010; Volkmann et al., 2011). Enforcement of laws in northern Mexican cities bordering the U.S. may be perceived as arbitrary (Beletsky et al., 2012, 2013; Davidson et al., 2012). The Mexican northern border region has a strong military presence that commonly works alongside local law enforcement in policing activities (Beittel, 2010; Beletsky et al., 2012; Meyer, 2010); human right violations and abuse by the military have been documented (Beletsky et al., 2012; Human Rights Watch, 2011; Meyer, 2010). In the U.S.-bordering city of Tijuana, arbitrary and problematic policing practices (e.g., harassment, unlawful arrests, abuse) have been linked to HIV risk behaviours among structurally vulnerable populations, including PWIDs, FSWs, and FSWs who inject drugs (Beletsky et al., 2013; Pollini et al., 2008; Robertson et al., 2010; Strathdee et al., 2005; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Volkmann et al., 2011).

Tijuana is home to a large presence of structurally vulnerable populations who are disproportionately affected by HIV. Approximately 10,400–17,400 men who have sex with men (MSM), 6400–10,000 PWIDs, and 4800–9000 sex workers reside in Tijuana (Brouwer et al., 2006; Iñiguez-Stevens et al., 2008). Tijuana also has a significant migrant and deportee population as it receives the highest proportion of deportees than any other Mexican city. In 2010, ~135,000 Mexican migrants were deported to Tijuana (Instituto Nacional de Migración, 2010; Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014). These subpopulations face substantial social and structural barriers (i.e., poverty, homelessness, stigma and discrimination, and barriers to accessing health care, HIV education and testing, and drug treatment) that increase their risk for acquiring HIV infection (Brouwer et al., 2009; Goldenberg, Strathdee, Gallardo, Nguyen, et al., 2011; Goldenberg, Strathdee, Gallardo, Rhodes, et al., 2011; Iñiguez-Stevens et al., 2008; Miller et al., 2008; Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014; Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012). An estimated 11% of MSM, 4% of male PWIDs, 10% of female PWIDs, 6% of FSWs, 12% of FSWs who are PWIDs, and 1.23% of deportees in Tijuana are HIV positive (Brouwer et al., 2006; Rangel et al., 2012; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Strathdee & Magis-Rodriguez, 2008). PWIDs who have been deported have 4 times the odds of being HIV positive compared to non-deported PWIDs (Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008). Problematic policing practices are an important risk factor that can potentially elevate the HIV risk profile of these structurally vulnerable populations.

Past studies suggest that certain characteristics, including visual markers, may increase susceptibility to police harassment. Along the U.S.–Mexico border, carrying syringes (despite their possession being legal in Mexico), having drug injection use stigmata (e.g., 'track marks'), recent arrests, homelessness, and higher frequencies of drug injection have been associated with negative encounters with police (Beletsky et al., 2013; Miller et al., 2008; Pollini et al.,

2008; Pollini, Gallardo, et al., 2010; Pollini, Lozada, et al., 2010; Volkmann et al., 2011). Qualitatively, migrants and deportees have described being targeted and harassed by local police for lacking legal identification documents (e.g., government issued voter card, Mexican birth certificate), which are commonly lost during their migration trajectory (Infante, Idrovo, Sanchez-Dominguez, Vinhas, & Gonzalez-Vazquez, 2012; Ojeda et al., 2011; Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014; Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012). Research investigating the link between adverse policing practices and HIV risk has been primarily concentrated among PWIDs and FSW. Little is known about Tijuana police and army interactions with other structurally vulnerable populations; such data may shed light on factors that increase susceptibility to police targeting and victimization.

This study is guided by concepts from Rhodes' 'HIV risk environment' framework (Rhodes, 2002; Rhodes, Singerb, Bourgoisc, Friedman, & Strathdee, 2005). This framework considers the context in which behaviours take place vis-à-vis disease outcomes. Determinants of HIV infection and risk are formed by an individual's interaction with his social and physical environment. The environment is conceptualized as macro- and micro-level factors operating at different domains of influence, including physical (e.g., homelessness, deportation), social (e.g., drug use, discrimination), economic (e.g., unemployment, access to employment), and policy (e.g., having legal identification documents). Factors within each level of influence constantly interact and shape risk practices and vulnerability to HIV among individuals who co-exist in that environment. As such, law enforcement and policing practices can be critical factors of the 'HIV risk environment' by operating at the micro- and macro-policy environment level (Aitken, Moore, Higgs, Kelsall, & Kerger, 2002; Burris et al., 2004; Rhodes et al., 2003; Strathdee et al., 2010); this framework has been previously applied to understand policing practices and HIV risk among PWIDs and FSWs in Tijuana (Goldenberg, Strathdee, Gallardo, Nguyen, et al., 2011; Goldenberg, Strathdee, Gallardo, Rhodes, et al., 2011; Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Volkmann et al., 2011). This study aims to identify correlates of police/army victimization (i.e., harassment or assault) in the past 6 months among patients seeking care at a student-run free clinic in Tijuana, Mexico. We hypothesize that selected micro- and macro-level factors within each domain of environmental influence that may serve as visual markers (e.g., homelessness, tattoos, injection drug use) will be associated with experiences of police/army harassment or assault in Tijuana. Anecdotally, patients from this clinic have expressed self-perceived discrimination over having tattoos; we were especially interested in testing the relationship between tattoos and police/army targeting and victimization.

Methods

Study design and participants

From January to May 2013, a convenience sample of 601 patients attending the binational Health Frontiers in Tijuana student-run free clinic (HFIT) were recruited to complete a questionnaire. The HFIT clinic is located in Tijuana's *Zona Norte* near the red light district and is situated <1 mile of the U.S.–Mexico border (Ojeda et al., 2013). In brief, free basic medical services are provided every Saturday to local residents. The clinic caters to uninsured, impoverished, and structurally vulnerable populations (e.g., sex workers, drugs users, homeless, migrants, deportees). Potential participants were approached by trained interviewers at the clinic lobby and screened

for eligibility in a private setting. Eligible participants were: (1) ≥ 18 years old; (2) seeking any HFIT clinic service; and (3) Spanish or English speakers. Those who met eligibility criteria were invited to join the study. Trained interviewers administered anonymous questionnaires in a private setting. The survey was administered electronically via Apple iPad tablets utilizing Qualtrics survey software (Provo, UT, USA) – a web-based program that allows for programming of questionnaires with complex skip patterns that is effective in reducing data collection errors. Questionnaire data are available in real-time on a secure, password protected server. All participants provided signed informed consent, received \$10 compensation for their time and refreshments during the interview process. The University of California, San Diego Human Research Protection Program and the Ethics Board of the HFIT clinic approved this study protocol.

Measures

Questionnaires collected data as described below according to our theoretical framework; details on the response categories are available in Table 1. *Socio-demographic* factors included gender, age, marital status, educational attainment, ability to speak English, and whether the participant or a family member spoke an indigenous language. *Physical influence* factors at the micro-level included: country of birth, being born outside of Baja California, years lived in Tijuana, ever arrested, and having ever been homeless or worked as a street vendor in the past 6 months. *Macro-physical measures* included: ever assaulted/robbed in Mexico, ever threatened/harassed in Mexico in the previous 6 months, ever migrated to the U.S., and ever deported from the U.S. At the *social influence* domain, micro-level measures included: lifetime and past 6-month drug or injection drug use, and exchanging sex in return for money, drugs, or goods. Participants also reported on the presence of any tattoos; those who answered affirmatively indicated the number, type of image, placement, and sentiments regarding their tattoos. *Macro-social factors* included: feeling rejected in the past 6 months and having family/friends in Tijuana. Within the *economic influence* domain, measures at the micro-level included: monthly income and unemployment in the past 6 months. *Macro-economic measures* included ever experienced barriers to employment, ever experienced barriers to employment due to appearance (e.g., clothes, cleanliness), and ever denied employment or housing in Tijuana in the prior 6 months. *Policy influence* measures at the micro-level included having a government issued identification (U.S. or Mexico – e.g., birth certificate, driver's license, green card). Our dependent variable 'police/army victimization' was assessed using the following bivariate question: "In the past 6 months in Tijuana, have you been harassed or assaulted by police (state or federal) or army officials?"

Analysis

Descriptive frequencies for independent variables within each of the Rhodes' 'HIV risk environment' domains were generated and tested for statistical associations with the dependent variable using Pearson chi-square and Wilcoxon rank sum tests for binary and continuous variables, respectively. Univariate logistic regression models identified factors associated with our dependent variable. Statistically significant variables at the ≤ 0.10 level from univariate analyses and central to our theoretical framework were considered for inclusion in our final multivariate logistic regression model. All variables considered for inclusion in our multivariate logistic regression model were assessed for possible collinearity and interaction; no statistically significant interactions were found among our covariates. Our final multivariate model was constructed using a manual selection process retaining variables that were significant

at $p < 0.05$; we controlled for deportation status as a possible confounder.

Results

Characteristics of persons experiencing police/army victimization

We found that 38% ($n = 228$) of participants reported victimization by police or army officials in Tijuana in the prior 6 months (Table 1). Participants who were male (86% vs. 63%; $p = 0.001$), younger (40.2 vs. 43.3 mean years; $p = 0.005$), and spoke English (33% vs. 25%; $p = 0.016$) were more likely to report police/army victimization. Within the physical influence domain, at the micro-physical level, participants were more likely to report experiences of police/army victimization if they had ever been arrested (81% vs. 57%; $p = 0.001$), had been homeless (73% vs. 57%; $p = 0.001$) or worked as a street vendor (26% vs. 19%; $p = 0.036$) within the same time frame. At the macro-physical level, U.S. migrants (84% vs. 73%; $p = 0.003$) and deportees (68% vs. 52%; $p = 0.001$) were more likely to report past 6-month experiences of police/army victimization by Tijuana officials.

Social influence factors at the micro-level associated with recent police/army victimization included drug use (51% vs. 35%; $p = 0.001$), injection drug use (32% vs. 14%; $p = 0.001$), or trading sex (30% vs. 17%; $p = 0.001$) in the past 6 months. Participants who indicated ≥ 1 tattoo (61% vs. 39%; $p = 0.001$) were more likely to report prior 6-month experiences of police/army victimization. At the macro-social level, feeling rejected in the past 6 months (48% vs. 18%; $p = 0.001$) was associated with police/army victimization. Within the economic influence domain, at micro-level, participants who experienced barriers to employment due to their appearance (35% vs. 19%; $p = 0.001$) and had been denied employment (57% vs. 30%; $p = 0.001$) or housing (22% vs. 8%; $p = 0.001$) in the past 6 months were more likely to report victimization experiences by police/army officials. At the micro-political level, participants who lacked official identification documents (53% vs. 40%; $p = 0.002$) were likely to report victimization experiences by Tijuana police/army officials. Univariate odds ratios examining correlates of police/army victimization are also provided in Table 1.

Characteristics of tattooed persons experiencing police/army victimization

Table 2 displays characteristics of tattooed participants ($n = 286$), stratified by past 6-month experiences of police/army victimization in Tijuana. On average participants had six tattoos. Tattooed participants who had a religious tattoo (e.g., Virgin Mary, Jesus Christ, Crucifix) (22% vs. 11%; $p = 0.009$) were more likely to have experienced police/army victimization in the past 6 months.

Factors independently associated with experiencing police/army victimization

In our multivariate logistic regression model, we identified factors within our socio-demographic, social influence, and economic influence domains that were independently associated with police/army harassment or assault in Tijuana in the 6 months prior to the interview. As shown in Table 3, being male (adjusted odds ratio (AOR): 3.71; 95% CI: 2.18–6.13) and younger age (AOR: 0.97 per year; 95% CI: 0.95–0.99) were independently associated with past 6-month police/army victimization. Within our social influence domain, micro-social factors independently associated with increased vulnerability to police/army victimization include past 6-month injection drug use (AOR: 2.16; 95% CI: 1.34–3.48) and having a tattoo (AOR: 1.53; 95% CI: 1.02–2.29). At the macro-social level, having felt rejected in Tijuana (AOR: 3.53; 95% CI: 2.31–5.41)

Table 1
Characteristics of persons attending a student-run free clinic, stratified by police/army harassment or assault in Tijuana in the past 6 months, 2013 (N=601).

	Assaulted or harassed by police/army in the past 6 months				Univariate Odds Ratio	95% Confidence Interval
	Total N (%)	No 373 (62%)	Yes 228 (38%)	p value		
Socio-Demographics						
Gender (male)	433 (72%)	236 (63%)	197 (86%)	0.001	3.69	2.39–5.69***
Mean age (SD)	42.1 (11.7)	43.3 (12.6)	40.2 (9.8)	0.005	0.98	0.96–0.99**
Married/common law	231 (38%)	143 (38%)	88 (39%)	0.950	1.01	0.72–1.42
Less than an elementary school education	266 (44%)	173 (47%)	93 (41%)	0.181	0.80	0.57–1.11
Speaks English (very well/well vs. not well/not at all)	169 (28%)	92 (25%)	77 (33%)	0.016	1.56	1.08–2.24**
Speaks (or family member speaks) indigenous language	61 (10%)	26 (7%)	35 (15%)	0.001	2.42	1.41–4.14***
Physical influence						
<i>Micro-physical</i>						
Foreign-born	19 (3%)	14 (4%)	5 (2%)	0.289	0.57	0.20–1.61
Born outside of Baja California	497 (83%)	304 (81%)	193 (84%)	0.322	1.25	0.80–1.95
Mean years lived in Tijuana (SD)	11.8 (14.2)	12.5 (14.9)	10.7 (13.1)	0.368	0.99	0.98–1.00
Ever arrested (Mexico or U.S.)	395 (66%)	211 (57%)	184 (81%)	0.001	3.21	2.17–4.72***
Homeless ^a	378 (63%)	212 (57%)	166 (73%)	0.001	2.03	1.42–2.90***
Works as street vendor ^a	131 (22%)	71 (19%)	60 (26%)	0.036	1.52	1.03–2.25*
<i>Macro-physical</i>						
Ever assaulted/robbed in Mexico	234 (39%)	124 (33%)	110 (48%)	0.001	1.86	1.33–2.61***
Has been threatened or harassed in Mexico ^a	105 (17%)	34 (9%)	71 (31%)	0.001	4.51	2.87–7.07***
Ever migrated to the U.S.	458 (77%)	269 (73%)	189 (84%)	0.003	1.87	1.24–2.82**
Ever deported from the U.S.	343 (58%)	191 (52%)	152 (68%)	0.001	1.91	1.36–2.68***
Social influence						
<i>Micro-social</i>						
Ever used illicit drugs	424 (71%)	238 (64%)	186 (82%)	0.001	2.51	1.69–3.73***
Used illicit drugs in past 6 months	245 (41%)	129 (35%)	116 (51%)	0.001	1.95	1.40–2.74***
Ever injected drugs	163 (27%)	71 (19%)	92 (40%)	0.001	2.88	1.99–4.17***
Injected drugs in past 6 months	127 (21%)	53 (14%)	74 (32%)	0.001	2.90	1.94–4.34***
Ever traded sex	134 (22%)	65 (17%)	69 (30%)	0.001	2.06	1.40–3.04***
Traded sex in past 6 months	79 (13%)	39 (10%)	40 (18%)	0.012	1.83	1.13–2.93**
Has ≥ 1 tattoo	286 (48%)	147 (39%)	139 (61%)	0.001	2.40	1.71–3.37***
<i>Macro-social</i>						
Has felt rejected in Tijuana ^a	176 (29%)	67 (18%)	109 (48%)	0.001	4.18	2.89–6.06***
Has no friends/family in Tijuana	198 (33%)	114 (31%)	84 (37%)	0.112	1.33	0.94–1.88
Economic influence						
<i>Micro-economic</i>						
Average monthly income ≥ 3500 pesos	107 (18%)	58 (16%)	49 (21%)	0.065	1.49	0.97–2.27
Unemployed ^a	177 (29%)	113 (30%)	64 (28%)	0.562	0.90	0.62–1.29
<i>Macro-economic</i>						
Has experienced barriers to employment in Tijuana	339 (56%)	184 (49%)	155 (67%)	0.001	2.18	1.55–3.08***
Has experienced barriers to employment due to appearance (e.g., clothes, cleanliness)	152 (25%)	72 (19%)	80 (35%)	0.001	2.28	1.56–3.31***
Has been denied employment in Tijuana ^a	241 (40%)	112 (30%)	129 (57%)	0.001	3.04	2.15–4.28***
Has been denied housing in Tijuana ^a	82 (14%)	31 (8%)	51 (22%)	0.001	3.18	1.96–5.15***
Policy influence						
<i>Micro-political</i>						
Does not have an official identification document	270 (45%)	149 (40%)	121 (53%)	0.002	1.71	1.22–2.38**

*p < 0.05, **p < 0.01, ***p < 0.001.

^a Refers to past 6 months.

was significantly associated with increased odds of experiencing police/army victimization. Within our economic influence domain, at the macro-level, being denied employment in the past 6 months (AOR: 2.24; 95% CI: 1.51–3.33) was independently associated with police/army victimization.

Discussion

This study assessed the prevalence and factors associated with recent police/army victimization experiences among a structurally vulnerable population seeking free healthcare services in Tijuana, Mexico. More than one-third of participants reported experiences of victimization by police/army officials in the prior 6 months.

In multivariate analyses, those who were most susceptible to victimization by police/army officials were most affected by micro-social (e.g., recent injection drug use, being tattooed), macro-social (e.g., has felt rejected in Tijuana), and macro-economic (e.g., being denied employment) factors. This study expands our knowledge regarding the relationship between individual and contextual factors and policing practices among a clinic-based sample of persons from Tijuana's *Zona Norte* that can be utilized to inform interventions that may aid in decreasing police targeting.

Within our social level influence domain, micro-level factors associated with police/army victimization included recent drug injection and being tattooed. Prior studies have also identified adverse policing practice among PWIDs in Tijuana (Pollini, Gallardo,

Table 2

Characteristics of tattoos among tattooed persons attending a student-run free clinic, stratified by police/army harassment or assault in Tijuana in the past 6 months, Tijuana, Mexico, 2013 (N = 286).

	Overall N (%)	Assaulted or harassed by police/army in the past 6 months		p value	Univariate odds ratio	95% Confidence interval
		No 147 (39%)	Yes 139 (61%)			
Tattoo characteristics						
Mean number of tattoos (SD)	6 (9.9)	5 (10.15)	6 (9.68)	0.003	1.01	0.99–1.04
Has visible tattoo (e.g., hands, face, neck, arms)	107 (37%)	85 (47%)	54 (50%)	0.625	1.12	0.69–1.81
Iconography						
Religious (e.g., Virgin Mary, Jesus Christ, Crucifix)	47 (16%)	16 (11%)	31 (22%)	0.009	2.35	1.22–4.52
Names	152 (53%)	80 (54%)	72 (52%)	0.657	0.90	0.56–1.43
Phrases	78 (27%)	44 (30%)	34 (24%)	0.299	0.75	0.44–1.27
Animals	48 (17%)	26 (18%)	22 (16%)	0.674	0.87	0.46–1.63
Nature	54 (19%)	25 (17%)	29 (21%)	0.405	1.28	0.71–2.32
Skulls	23 (8%)	8 (5%)	15 (11%)	0.096	2.10	0.86–5.12
Weapons	6 (2%)	2 (1%)	4 (3%)	0.371	2.14	0.38–11.91
Gang-membership (e.g., gang name, symbol, or logo)	18 (6%)	6 (4%)	12 (9%)	0.113	2.22	0.80–6.08
Sentiments about tattoos						
Does not care/dislikes some/all tattoos (vs. likes a lot/is proud of tattoos)	173 (60%)	89 (61%)	84 (60%)	0.984	0.96	0.61–1.59
Would like to remove all/some tattoos (vs. not)	161 (56%)	77 (52%)	84 (60%)	0.170	1.38	0.86–2.22
Would be interested in a free tattoo removal service at the clinic	197 (69%)	98 (67%)	99 (71%)	0.406	1.23	0.74–2.04
Has experienced barriers to employment in Tijuana as a result of being tattooed	88 (30%)	40 (27%)	48 (35%)	0.192	1.39	0.84–2.31
Believes removal of tattoos will help secure employment in Tijuana	157 (56%)	74 (52%)	83 (60%)	0.176	1.38	0.86–2.22

et al., 2010; Pollini, Lozada, et al., 2010; Rhodes et al., 2005; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Volkmann et al., 2011). A dishevelled image or having ‘track marks’ may increase vulnerability to police targeting and abuse (Miller et al., 2008; Pollini, Gallardo, et al., 2010; Pollini, Lozada, et al., 2010; Strathdee et al., 2005; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008). Physical markers of drug use behaviours may easily identify vulnerable persons

Table 3

Factors independently associated with police/army harassment or assault in Tijuana in the past 6 months among persons attending a student-run free clinic, 2013 (N = 601).

	Adjusted odds ratio	95% Confidence interval
Socio-demographics		
Gender (male)	3.71	2.18–6.13
Age (per year)	0.97	0.95–0.99
Physical influence		
<i>Micro-physical</i>		
Homeless in the past 6 months	1.31	0.95–0.98
<i>Macro-physical</i>		
Ever deported from the U.S.	0.98	0.64–1.53
Social influence		
<i>Micro-social</i>		
Injected drugs in the past 6 months	2.16	1.34–3.48
Has a tattoo	1.53	1.02–2.29
<i>Macro-social</i>		
Has felt rejected in Tijuana the past 6 months	3.53	2.31–5.41
Economic influence		
<i>Macro-economic</i>		
Has been denied employment in the past 6 months	2.24	1.51–3.33

and elevate the likelihood of being victimized by law enforcement officials.

Our finding that having a tattoo is independently associated with recent police/army victimization is a novel finding that to our knowledge has not been previously documented in the Mexican context. Tattoos are increasingly common in the U.S. (Pew Research, 2010), compared to Mexico where tattooed persons are stigmatized and tattoos are associated with deviant behaviours (e.g., delinquency, drug use, and gang activity) (El Universal, 2012; Proceso, 2013). Such perceptions may take even greater meaning in the context of Tijuana where the drug trafficking and drug culture have given rise to a *narco cultura*, a subculture that glamorizes the lifestyle of drug traffickers through dress, music, film, and religious devotion (Campbell, 2014; Rodney, 2014; Rojas-Sotelo, 2014). Depending on the content, tattoos may also be associated with *narco cultura*. Religious tattoos may not have religious meanings and may instead be used as a symbol for group membership, especially among Latino gangs and *narco cultura* (Bazan, Harris, & Lorentzen, 2002; Booth, 2009; López-Gydosch & Hancock, 2009; Suzdaltsev, 2014). Additionally, along the U.S.–Mexico border region, tattoos may be associated with being a migrant or deportee (El Herald, 2011; El Mexicano Gran Diario Regional, 2011; Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014), two marginalized subpopulations that face considerable stigma and discrimination. Thus, tattoos can be important visual identifiers that may increase individual’s vulnerability and chances of being profiled by law enforcement and contribute to mistreatment. We were unable to identify any prior studies examining the relationship between tattoos and policing practices in Mexico, which warrants future exploration in larger studies.

At the macro-social level, feeling rejected in Tijuana in the prior 6 months was independently associated with recent police/army victimization. Our participants displayed different levels of vulnerability (e.g., U.S. migrants: 77%, deportees: 58%, previous/current drug users: 71%, and homeless persons: 63%). These groups face substantial social stigma, discrimination, and are socially rejected by the local community (Pinedo, Burgos, & Ojeda, 2014; Pinedo,

Burgos, Robertson, et al., 2014; Pollini, Gallardo, et al., 2010; Pollini, Lozada, et al., 2010; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008). Tijuana has a dynamic migrant population: ~50% of its 1.6 million residents are migrants; the city receives approximately 40% of all deported Mexican migrants from the U.S. (Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014). Qualitative interviews with migrants and deportees in Tijuana suggest that police harassment, extortion, and violence are pervasive (Infante et al., 2012; Ojeda et al., 2011; Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012). Deportees who inject drugs in Tijuana are more likely to have ever been incarcerated, compared to their non-deported counterparts (Pollini et al., 2009). Homelessness in the past 6 months was high among our participants (63%); homeless persons are often vulnerable to police profiling and abuse given their high visibility (Ti et al., 2013; Werb et al., 2008). Homelessness in Tijuana is pervasive among PWIDs, migrants, and deportees (Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Ti et al., 2013; Velasco & Albicker, 2013; Volkmann et al., 2011). These subpopulations also face larger structural barriers that may impede integration into society (Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012). Feelings of rejection may be an indicator for these populations' marginalized position in society and should be explored in relation to mental health status indicators among structurally vulnerable persons in the border region.

At the macro-economic level, having been denied employment in the past 6 months was independently associated with recent police/army victimization. In Tijuana, structurally vulnerable populations face multiple barriers to employment (e.g., stigma, discrimination, homelessness) (Brouwer et al., 2009; Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Volkmann et al., 2011). More than half of our participants reported experiencing barriers to employment; 26% reported experiencing barriers due to their physical appearance (e.g., clothes, cleanliness). Almost half (45%) lacked documents which are needed to prove Mexican citizenship and gain formal employment or access to health and social services. Tattooed persons may face an additive barrier as tattoos are commonly regarded unfavourably by businesses (El Mexicano Gran Diario Regional, 2012; Los Recursos Humanos, 2011; Rodriguez, 2012). Among tattooed participants ($n=286$), 30% reported having experienced barriers to employment as a result of being tattooed; 56% believed that removing their tattoos (via a tattoo removal service) would facilitate finding employment. Those who are denied access to employment or resources in the formal economy may be more likely to engage in informal labour market activities such as trading sex, selling goods on the streets (i.e., street vendor), and overall spending more time on the street (Novo, 2003; Ojeda et al., 2011; Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012). Exclusion from the labour market may increase structurally vulnerable persons' visibility and likelihood of being victimized by police or army officials in the city; this remains to be tested in a larger study.

Our findings must be evaluated in the context of several limitations. The study recruited a convenience sample of patients seeking free care and thus, participants may be different from those who have not sought care or those experiencing access to care barriers. Participants may have underreported drug use and sexual behaviours. However, our highly trained interviewers administered an anonymous survey and interviews were conducted at the HFIT clinic, which is widely regarded by the community and patients as a 'safe space' to receive free clinical care and be treated with respect and dignity. Our study lacked specific

measures on involvement in illegal activities outside the scope of illicit drug use and the role of participant's social networks, which may increase police profiling. We lacked data on the context for the circumstances surrounding the police/army victimization thus cannot determine the appropriateness of law enforcement actions. Nevertheless, our findings merit further investigation in a randomly selected community-based sample in order to better tailor interventions aimed at reducing abusive policing practices.

Conclusion

Links between problematic policing practices and HIV risk have been well documented among PWIDs and FSWs (Beletsky et al., 2013; Burris et al., 2004; Burris & Strathdee, 2006; Strathdee et al., 2010; Ti et al., 2013). Scant data on law enforcement interactions experienced by other structurally vulnerable populations who are at increased risk for HIV exists. A better understanding of how police victimization may influence HIV risk for other structurally vulnerable populations (e.g., non-drug users) is critical. Research suggests that non-drug users who reside in areas with a large injection drug using population are at increased risk for police victimization and adversely impact their health (Cooper, Moore, Gruskin, & Krieger, 2004). The relationship between policing practices and HIV risk among non-drug using persons who are at increased risk for HIV is understudied and represents an important gap in the policing literature. Our study yields novel findings that expands our knowledge on individual and contextual factors that may increase vulnerability to police victimization. Independent of injection drug use – which is a documented risk factor for police victimization, our study suggests that being tattooed, feelings of rejection, and being denied employment are important factors that may increase the odds of police victimization in Tijuana's *Zona Norte*.

Interventions aimed at increasing social integration may aid in reducing police/army victimization, as well as social stigma, and discrimination among structurally vulnerable populations. Such interventions may support adoption of preventive behaviours and reduce HIV susceptibility. Tattoo removal services may alleviate barriers associated with discrimination and employment; our study indicates that interest in this service exists. Homeboy Industries, a non-profit in Los Angeles, California, removes gang-related tattoos and provides employment services and training that facilitates transition back into society among ex-gang members (Bazan et al., 2002; Darnell, 2013; Leap, Franke, Christie, & Bonis, 2011). This model may be adapted and replicated in the Mexican context; however these outcomes have not been assessed systematically and merit further research. Increased efforts to facilitate the replacement of legal identification documents may also increase social incorporation and access to employment and resources. Replacing these documents can be a great burden for individuals with no ties to their birthplace or means to travel, as is common among deportees (Ojeda et al., 2011; Robertson, Lozada, et al., 2012; Robertson, Ojeda, et al., 2012; Robertson, Vera, et al., 2012; Slack, Martinez, Whiteford, & Pheiffer, 2013).

Law enforcement and policing practices are critical environmental factors influencing HIV risk (Burris & Strathdee, 2006; Pinedo, Burgos, & Ojeda, 2014; Pinedo, Burgos, Robertson, et al., 2014; Strathdee et al., 2010; Werb et al., 2008). The removal of this environmental risk may decrease HIV incidence (Strathdee et al., 2010). Increased coordination between police and public health initiatives may be a successful strategy to promote harm reduction efforts among populations who are at increased risk for HIV (Beletsky, Agrawal, et al., 2011; Beletsky, Grau, et al., 2011; DeBeck et al., 2008). Police education and training to reduce problematic policing practices in Tijuana are warranted and have been

previously recommended (Philbin et al., 2008; Strathdee, Lozada, Ojeda, et al., 2008; Strathdee, Lozada, Pollini, et al., 2008; Volkman et al., 2011). Such trainings are currently being implemented among police officials in the city and may aid in alleviating HIV risks along the U.S.–Mexico border (Scholl & Nicholson, 2010).

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Conflict of interest

All authors declare that they have no conflicts of interest.

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