Harms of Workplace Inspections for Im/Migrant Sex Workers in In-Call Establishments: Enhanced Barriers to Health Access in a Canadian Setting

Bronwyn McBride1,2 · Kate Shannon1,3 · Putu Duff1 · Minshu Mo1 · Melissa Braschel1 · Shira M. Goldenberg1,4

© Springer Science+Business Media, LLC, part of Springer Nature 2019

Abstract
Given shifting sex work criminalization and enforcement in Canada, this study examined worrying about workplace inspections by authorities amongst indoor sex workers in Vancouver (2014–2017). Data were drawn from a community-based prospective cohort of sex workers (AESHA). Bivariate and multivariable logistic regression were used to investigate factors associated with worry about inspections. 23.9% of participants experienced workplace inspections; 51.6% worried about inspections. In multivariable analyses, worrying about inspections was associated with recent im/migration [adjusted odds ratio (AOR) 3.13; 95% confidence interval (CI) 1.77–5.53], police harassment (AOR 3.49; 95% CI 1.92–6.34), and workplace violence (AOR 1.66, 95% CI 1.09–2.51). In a multivariable confounder model, worry was independently associated with barriers to health access (AOR 1.45, 95% CI 1.06–1.98). Im/migrant indoor workers are disproportionately impacted by concerns about workplace inspections, which was independently linked to enhanced barriers to health access. Current criminalization measures may exacerbate health inequities among im/migrant sex workers.

Keywords Migrant sex workers · Indoor sex work · Sex work · Criminalization · Social inequities

Background
Globally, workers often migrate seeking improved working conditions, yet frequently face precarious employment and health inequities due to intersecting legal and social factors in destination settings [1–5]. In Canada, immigrant and migrant (im/migrant1) workers are disproportionately exposed to occupational health hazards [1, 2, 6], and face structural barriers to health access including low language...
proficiency and lack of information [4, 7–12] which impact their physical and mental health [13]. Im/migrant women in Canada face gendered labour and health vulnerabilities: they are more likely to be overqualified relative to their level of employment [14, 15] and are overrepresented in lower paying sectors (e.g. caregiving) [15]. Im/migrant women may also prioritize family needs over personal health care [11] and face disproportionate health deterioration during their first 2 years in Canada [16]. Further, unemployment, low language proficiency and experiences of discrimination are risk factors for poor health among im/migrant women [16, 17].

Labour and health inequities among im/migrant women are heightened for those in sex work due to criminalization. In Canada, selling sexual services is legal for non-migrants, but is fully prohibited for open work permit holders and temporary residents (including those authorized to work) [18]. While this policy purportedly aims to guard against exploitation, research suggests that the majority of im/migrant sex workers are legal immigrants [19, 20], yet experience barriers to formal employment, racial and ethnic discrimination, and social isolation [19, 21, 22]. Concerningly, im/migrant sex workers in Canada face cultural and legal barriers to approaching authorities for legal protection [20, 22, 23] and accessing health services [19, 24, 25]. A Canadian study found that recent im/migrant sex workers (arrived in the last 5 years) faced a threefold increased odds of unmet health needs relative to non-im/migrant workers [26].

Due to the criminalized nature of sex work for many im/migrant workers, racialized sex workers in indoor (in-call) spaces have been a longstanding target for raids and inspections by Canadian police and immigration authorities aiming to identify trafficking victims and undocumented migrants [27–29]. As im/migrant sex workers in Canada continue to work largely in in-call venues (i.e., massage parlours, body rub studios) [19, 20, 23], police oversight of these venues is ongoing. Further, end-demand Canadian sex work legislation (the Protection of Communities and Exploited Persons Act [PCEPA]) was passed in 2014, leaving the sale of sex legal while continuing to criminalize the operation of managed in-call sex work venues through prohibiting third party material benefits [30]. In summary, while selling sex services is technically legal, many aspects of sex work remain criminalized, particularly for many types of im/migrants who frequently rely on third parties in indoor venues (such as venue owners, managers and receptionists) for support with advertising, screening clients, and security. Despite the estimated hundreds of in-call sex work venues across Metro Vancouver [31], research on the impacts of criminalization and its enforcement in Vancouver has largely focused on street-involved workers [32–35]. Further, research shows that supportive in-call environments can promote sex workers’ health and safety through supporting condom use negotiation and decreased violence against workers [36–40].

In-call sex work spaces employing racialized women may be disproportionately impacted by PCEPA enforcement in the form of police raids/inspections due to the continued criminalization of third party activities, and conflation of sex work (consensual exchange of sex services) with sex trafficking (forced sexual labour) [41, 42]. Recent qualitative research suggests that Asian im/migrant sex workers and managers perceive themselves to be disproportionately targeted by surveillance by police and immigration authorities [19, 22, 37] in workplace inspections where the authorities search for condoms, check IDs and work permits among workers, and may question workers individually [22, 43].

Municipal authorities also heavily regulate sex work venues through high licensing fees, strict by-law regulations (e.g., keeping the premises’ entry door and massage room doors unlocked; maintaining unobstructed windows in massage rooms),[44] and venue inspections and fines for by-law violations, [45] which represent a subtler form of criminalization and surveillance. Recent massage parlour inspections in multiple Canadian cities have resulted in arrests, charges, detention, threats of deportation, and deportation of workers [43, 46–49], illustrating the threatening potential consequences of facing a workplace inspection. In Metro Vancouver, policing practices and municipal licensing enforcement have been linked to increased risk of violence and lost income and clients among im/migrant and indoor sex workers [45]. However, few studies have assessed how the ongoing threat of facing a workplace inspection may impact sex workers’ health or interact with other facets of im/migration-related marginalization, with a particular dearth of longitudinal and quantitative research.

Given im/migration policies which prohibit sex work among some types of im/migrants, as well as new Canadian end-demand legislation which continues to criminalize the operation of managed in-call sex work venues and conflates sex work with sex trafficking, there is concern that law enforcement efforts may disproportionately target im/migrant and indoor sex workers through workplace inspections. To explore how such criminalization may impact health and safety among these groups, this study explored factors associated with worrying about workplace inspections by police, municipal, immigration or health authorities amongst indoor sex workers in Metro Vancouver from 2014 to 2017, and modeled the independent effect of worry about inspections on health access.

Conceptual Framework

A structural determinants framework, considering macrostructural determinants (e.g., laws, migration trends), community organization factors (e.g., sex worker
collectivization) and work environment determinants (e.g., municipal workplace policies) has been proposed to explore the multilevel factors shaping individual sex workers’ physical and psychological health and safety [50]. This approach is particularly relevant to investigating how criminalization impacts im/migrant sex workers working in in-call venues, who represent a relatively hidden population and face heightened social and economic barriers to health associated with migration, legal and minority status [19, 20, 51]. At the work environment level, managerial practices and venue policies can act to support or constrain workers’ health access [36, 38, 52], while macrostructural determinants related to migration (e.g., financial vulnerability, ethnic discrimination) and criminalization (e.g., workplace inspections, policing), also contribute to stigma at the individual level. This study focused on fear of inspections by authorities, which is conceptualized as a feature of the work environment which is shaped by sex work and im/migration laws and policies and may have important implications for sex workers’ health, safety, and access to justice, particularly for im/migrant and indoor workers [19, 21, 53].

Methods

Participants and Data Collection

Data for this study were drawn from an open prospective community-based cohort, An Evaluation of Sex Workers Health Access (AESH), which initiated recruitment in January 2010. AESHA was developed based on community collaborations with sex work organizations since 2005 [54] and is monitored by representatives of 15+ community agencies. Eligibility criteria include identifying as a woman (inclusive of cisgender and transgender women), having exchanged sex for money within the last 30 days, and providing written informed consent. Time-location sampling (a probability-based method for recruiting participants of a target population at times and places where they assemble) [55] was used to recruit youth and women aged 14 and up through day and late night outreach to outdoor/public sex work locations (i.e., streets, alleys) and indoor sex work venues (i.e., massage parlours, micro-brothels, informal indoor locations) across Metro Vancouver. Online recruitment (i.e., through placing advertisements on relevant apps and websites) was used to reach sex workers working through online solicitation spaces. Indoor and outdoor sex work spaces are identified through ongoing community mapping conducted with current/former sex workers. Details of the AESHA study design and community partnerships are described elsewhere [54].

Participants completed interviewer-administered questionnaires at baseline and semiannual follow-up visits. Experiential (current/former sex workers) and multilingual staff are represented across interview, nursing, and outreach teams. The primary questionnaire elicited responses related to socio-demographics, interpersonal factors, sex work patterns, and work and structural environment factors. A shorter pre-test counseling questionnaire and voluntary HIV/STI serology testing (i.e., syphilis, gonorrhea, and chlamydia) was administered by a project nurse to facilitate education, support, and referral. All participants received $40 CAD at each biannual visit for their time, expertise, and travel expenses. For this analysis, the study period covered the transition to the PCEPA (September 2014–February 2017) and included participants who worked in formal (i.e., massage parlours) or informal (i.e., hotels) indoor spaces. The study holds ethical approval through Providence Health Care/University of British Columbia Research Ethics Board.

Measures

The primary outcome was a time-updated measure of worrying about a venue inspection by police, municipal, health or immigration authorities. Worry about inspections was defined as worry about the potential economic consequences (e.g., clients being scared away by police, workers losing income, workplace being shut down), social consequences (e.g., family finding out about sex work) or legal consequences (e.g., loss of visa, deportation or threat of deportation, arrest) of experiencing a workplace inspection, within the past 6 months. This outcome variable was developed based on concerns voiced at the community level around fear of workplace inspections and recommendations from our community-based outreach team. This measure aims to explore how, even in the absence of direct interactions with authorities, punitive policing practices and immigration policies may have physical and/or mental health impacts among sex workers.

Based on our structural determinants framework [50], variables of interest at individual, workplace and structural levels were selected based on the literature and previously published AESHA data. Time-fixed variables included age, education (high school completion vs. less than high school), migration duration (<5 years vs. 5+ years in Canada), and Canadian citizenship status at baseline. All other variables were time-updated at each semiannual follow-up and included events occurring during the past 6 months. Individual factors included any consumption of alcohol, and any injection and non-injection substance use (e.g., crack cocaine, heroin, prescription drugs). Structural factors included experiencing a workplace inspection by police/municipal/health/immigration authorities (yes vs. no); primary place of serving clients [formal (e.g. massage parlour, body rub studio) vs. informal (e.g. apartment, bar) indoor venues]; work stress (measured using a 13-item scale validated through factor analysis [36], with higher scores
corresponding to enhanced work stress); police harassment without arrest (e.g., any experience of being told to move on, verbal harassment, threats regarding arrest/detainment/fines, physical assault, property confiscation, or being propositioned/coerced into providing sexual favours); experiencing physical/sexual/verbal workplace violence from an aggressor posing as a client (defined as any experience of verbal harassment, threats, being ripped off, sexual assault, rape, physical assault, assault with a weapon), and condom sources and practices (receiving >75% of condoms from mobile outreach; number of condoms carried per shift). Barriers to health care were based on the question “In the last 6 months, what barriers to receiving health care have you experienced?” Participants were coded as having faced barriers to health care if they responded ‘yes’ to any of a list of barriers including (but not limited to) lack of availability/limited clinic hours, language or health coverage barriers, privacy concerns, low acceptability of services, lack of services tailored to participants’ gender/ethnicity/culture, or poor treatment by health professionals.

Statistical Analysis

Analyses were restricted to indoor sex workers who were interviewed and answered questions about workplace inspections during the implementation of end-demand sex work legislation (September 2014–February 2017, n = 397).

Explanatory Model

A multivariable explanatory model was used to identify variables associated with worry about inspections. Descriptive statistics were calculated, stratified by the outcome, and bivariate analyses were conducted using logistic regression with generalized estimating equations (GEE) and an exchangeable correlation structure to examine the relationship between the inspection worry outcome and a variety of factors. We used a GEE approach to account for within-subject correlation (due to repeated measures on the same respondent) arising from the longitudinal study design [56]. Unadjusted odds ratios were obtained using bivariate analyses, and variables hypothesized to be related to worry about inspections and which were significant at p < 0.05 in bivariate analyses were considered for inclusion in the multivariable model. Due to issues with collinearity, some variables related to im/migration status, including English proficiency and Canadian citizenship, were excluded from the full multivariable model. A complete case analysis was performed, where cases with any missing observations were excluded from the multivariable model. A manual backward model selection process was used to identify the multivariable model with the best fit (as indicated by the lowest quasi-likelihood under the independence model criterion) to obtain the adjusted odds ratios.

Confounder Model

Given that im/migrant sex workers face enhanced barriers to health services and unmet health needs [23, 24, 26] and evidence with primarily street-involved sex workers suggesting that policing practices are a key barrier to health access, we constructed a confounder model to examine the independent effect of worry about inspections on barriers to health access. In this approach, using the process described by Maldonado and Greenland [57], potential confounding variables based on bivariate associations identified in our initial explanatory model were removed in a stepwise manner, and variables that altered the association of interest by < 5% were systematically removed from the model. All statistical analyses were performed in SAS version 9.4 (SAS, Cary, NC) and all p-values are two-sided.

Results

During this 2.5-year study, of 397 indoor sex workers (925 observations), 23.9% (n = 95) experienced a workplace inspection. Among these 95 participants, 30.5% experienced a police inspection; 64.2% a municipal inspection; 40.0% a health inspection; and 1.1% an immigration inspection, with a single inspection incident often featuring multiple types of inspectors. However, over half of all participants (51.6%, n = 205) reported worrying about inspections. Baseline demographic characteristics are presented in Table 1. Among the full sample (n = 397), the median age was 37 (IQR 29–43), and 52.1% had completed high school. 27.0% of respondents were im/migrants, and of these, 35.5% had migrated in the last 5 years. The majority of im/migrant respondents originated from China, while others had come from the U.S., Russia, Philippines, Thailand and several other countries.

Among the 205 participants who reported worry about inspections, 66.3% worried that an inspection could result in police deterring clients, 44.9% about police harassing clients, and 39.0% about their family finding out about sex work. In addition, 41.5% worried about sex-work related arrest, and 9.8% about arrest for having condoms. 22.9% worried that inspections would result in negative family consequences, and 21.5% about their workplace being shut down/fined. Finally, 10.2% worried about losing their visa or immigration status, and 9.3% about deportation.
### Table 1
Baseline individual and structural factors stratified by worrying about the consequences of a workplace inspection among sex workers working in indoor venues in Metro Vancouver, BC (n = 397), AESHA 2014–2017

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total (N=397) n (%)</th>
<th>Worried about the consequences of a workplace inspection, last 6 months</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yes (N = 148) n (%)</td>
</tr>
<tr>
<td><strong>Individual factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age, median (IQR)</td>
<td>37 (29–43)</td>
<td>35.5 (27–42)</td>
<td>38 (30–44)</td>
</tr>
<tr>
<td>Limited English fluencya</td>
<td>63 (15.9)</td>
<td>41 (27.7)</td>
<td>22 (8.8)</td>
</tr>
<tr>
<td>Completed high school</td>
<td>207 (52.1)</td>
<td>84 (56.8)</td>
<td>123 (49.4)</td>
</tr>
<tr>
<td><strong>Substance use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol usea</td>
<td>237 (59.7)</td>
<td>92 (62.2)</td>
<td>145 (58.2)</td>
</tr>
<tr>
<td>Binged on alcohola</td>
<td>38 (9.6)</td>
<td>19 (12.8)</td>
<td>19 (7.6)</td>
</tr>
<tr>
<td>Non-injection drug usea,b</td>
<td>231 (58.2)</td>
<td>81 (54.7)</td>
<td>150 (60.2)</td>
</tr>
<tr>
<td>Injection drug usea</td>
<td>179 (45.1)</td>
<td>62 (41.9)</td>
<td>117 (47.0)</td>
</tr>
<tr>
<td><strong>Structural determinants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian citizen</td>
<td>336 (84.6)</td>
<td>111 (75.0)</td>
<td>225 (90.4)</td>
</tr>
<tr>
<td>Im/migration status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian-born (Ref)</td>
<td>288 (72.5)</td>
<td>91 (61.5)</td>
<td>197 (79.1)</td>
</tr>
<tr>
<td>Recent im/migrant (≤ 5 years)</td>
<td>38 (9.6)</td>
<td>27 (18.2)</td>
<td>11 (4.4)</td>
</tr>
<tr>
<td>Long-term im/migrant (&gt; 5 years)</td>
<td>59 (14.9)</td>
<td>25 (16.9)</td>
<td>34 (13.7)</td>
</tr>
<tr>
<td>Work environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primarily serviced clients in a formal in-call venue (vs. informal indoor)a</td>
<td>90 (22.7)</td>
<td>53 (35.8)</td>
<td>37 (14.9)</td>
</tr>
<tr>
<td>Total work stress scorea, median (IQR)</td>
<td>32 (30–35)</td>
<td>34 (31–37)</td>
<td>32 (28–34)</td>
</tr>
<tr>
<td>Health care access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced barriers to healthcarea</td>
<td>278 (70.0)</td>
<td>110 (74.3)</td>
<td>168 (67.5)</td>
</tr>
<tr>
<td>Most condoms came from mobile outreacha</td>
<td>143 (36.0)</td>
<td>70 (47.3)</td>
<td>73 (29.3)</td>
</tr>
<tr>
<td>Number of condoms carried per shifta, median (IQR)</td>
<td>4 (2–10)</td>
<td>4 (2–10)</td>
<td>4 (2–10)</td>
</tr>
<tr>
<td>Experienced physical/sexual/verbal workplace violencea</td>
<td>70 (17.6)</td>
<td>38 (25.7)</td>
<td>32 (12.9)</td>
</tr>
<tr>
<td>Experienced police harassment without arresta</td>
<td>28 (7.1)</td>
<td>19 (12.8)</td>
<td>9 (3.6)</td>
</tr>
<tr>
<td>Experienced a workplace inspectiona</td>
<td>48 (12.1)</td>
<td>15 (10.1)</td>
<td>33 (13.3)</td>
</tr>
</tbody>
</table>

All data refer to n (%) of participants unless otherwise specified

aTime updated variables using last 6 months as a reference point
bNon-injection drug use excludes alcohol and cannabis use

### Explanatory Model

Bivariate (unadjusted odds ratios) and multivariable (adjusted odds ratios) GEE results for factors associated with worrying about workplace inspections are presented in Table 2. In bivariate analysis, worry about inspections was significantly associated with limited English fluency [Odds Ratio (OR) 2.54, 95% confidence interval (CI) 1.68–3.82], working primarily in formal in-call venues (OR 2.47, 95% CI 1.71–3.56), physical/sexual/verbal workplace violence (OR 2.20, 95% CI 1.54–3.13), and police harassment without arrest (OR 3.71, 95% CI 2.20–6.26). In multivariable GEE analyses, worrying about inspections was independently associated with younger age [Adjusted Odds Ratio (AOR) 0.97, 95% CI 0.95–0.99 per year older], recent im/migration (AOR 3.13; 95% CI 1.77–5.53), physical/sexual/verbal workplace violence (AOR 1.66, 95% CI 1.09–2.51), police harassment without arrest (AOR 3.49; 95% CI 1.92–6.34), and enhanced work stress (AOR 1.05, 95% CI 1.01–1.09 per additional score on scale).

### Confounder Model

In a separate confounder model adjusted for recent and long term im/migration to Canada, physical/sexual/verbal workplace violence, and police harassment, worry about inspections remained independently associated with enhanced barriers to health access (AOR 1.45, 95% CI 1.06–1.98 (Table 3).
This 2.5-year study conducted during the implementation of Canadian end-demand sex work legislation found that over half of indoor sex workers in Metro Vancouver worried about the consequences of workplace inspections by authorities. Youth, recent im/migrants, those facing workplace violence, those experiencing police harassment, and those facing higher work stress were significantly more likely to worry about inspections. The independent effect of worry about inspections on enhanced barriers to health access suggests that the perceived threat of current criminal justice, immigration and municipal enforcement activities which criminalize aspects of indoor and im/migrant sex work may exacerbate health inequities among indoor sex workers, most notably recent im/migrants.

This study builds on qualitative evidence from Vancouver and Toronto suggesting that formal in-call sex work venues employing im/migrant women are disproportionately targeted by inspections [22, 37, 43]. Workplace inspections can elicit psychological stress for indoor im/migrant sex workers, as language interpreters are infrequently available; authorities seek out evidence of sex work by searching for condoms and invading massage rooms; and recent news reports have shown that immigration status revocation and deportation are potential consequences of inspections [20, 22, 43, 46]. These distressing experiences represent an
additional burden faced by recent im/migrant women in sex work, who also experience barriers to formal employment, economic security and health services due to language barriers, stigma, and social isolation [20, 45, 58, 59]. Given evidence that supportive indoor workplaces can offer critical health and safety protections for sex workers [36, 52, 60–62] and mitigate some facets of marginalization experienced by im/migrant sex workers [23, 37, 45, 63], there is concern that worry about targeted venue inspections may undermine the protective effects of these work environments. Reduced access to safer indoor venues can result in sex workers working independently and in less conspicuous spaces (e.g., apartments), which can increase their vulnerability to violence [20, 45]. Our findings also showed that worry about inspections was significantly associated with experiences of police harassment, workplace violence, and elevated work stress. In previous research from Canada, Cote d’Ivoire and India, police harassment has been linked to increased odds of violence and rape among sex workers [64–66]. Given this evidence, our results suggest that current policing practices may have unintended consequences on sex workers’ working conditions and vulnerability to workplace violence.

Our finding that worry about inspections was independently associated with a nearly 50% increased odds of facing barriers to health care is alarming given that those worried about inspections were also more likely to be im/migrant women, who face documented health inequities. Prior research has documented an association between precarious im/migration status (i.e., undocumented status, temporary workers) and avoiding health services,[67–69] and there is evidence that sex workers generally avoid health services due to stigma and criminalization [70, 71]. Taken together, this evidence suggests that im/migrant sex workers may fear workplace inspections and their potential consequences due to stigma based on sex work involvement, and sex work criminalization among im/migrants, which may impact their access to health services. In addition, research from Vancouver suggests that health outreach workers have been denied entry into indoor sex work venues due to venue managers’ worry about workplace inspections and their consequences [37], restricting sex workers’ access to this health service provision. The disproportionate enforcement attention to sex work venues employing im/migrant women and noted lack of interpretation services during inspections contribute to intimidation and a higher likelihood of perceived police harassment, which may further exacerbate im/migrant sex workers’ avoidance of authorities and barriers to accessing legal protections [19, 23].

This research suggests there may be unintended health and social consequences of enforcement practices enacted in the context of end-demand legislation, illustrating the broad community impacts of continued criminalization. That recent im/migrant women were disproportionately affected by worry is particularly concerning given that end-demand legislation, Canadian immigration policies, and current enforcement efforts all hold the stated aims of protecting vulnerable persons and communities. This quantitative research contributes to widening evidence on the harms of criminalization on sex workers’ health and safety—impacts which directly contrast against the purported aims of Canadian sex work law [51].

**New Contribution to the Literature**

This study’s quantitative analysis of factors associated with worry about inspections represents an important novel contribution, as little research has examined the impacts of shifting criminalization and enforcement practices on indoor sex workers, and im/migrant workers in particular. The inclusion of the worry about inspections outcome was informed by the community-based nature of this research, which constitutes another strength. The impact of worry about inspections on barriers to health access is a critical finding, and further investigation into the psychological and mental health impacts of law enforcement interactions is recommended. Data were self-reported and may be subject to recall bias, social desirability and reporting bias, but the likelihood of these biases is reduced by the study’s community-based implementation. Our ability to assess correlates of exposure to workplace inspections, differentiate between types of indoor venues (e.g., micro-brothels, informal spaces) or examine shifts in legal immigration status over time was limited by available data. Future longitudinal and mixed-methods research may contribute to elucidating how criminalization impacts sex workers in various indoor environments, and with varying immigration experiences, legal status, and ethnic minority identities.

**Conclusions**

This research highlights how end-demand sex work criminalization, immigration policies, and the increased policing of indoor venues may disproportionately impact recent im/migrant sex workers, and suggests that worry about inspections may pose a powerful barrier to workers’ access to health services.

As the decriminalization of sex work promotes enabling structural conditions wherein sex workers can access supportive indoor workspaces, police protections and health services [72], policy institutions including the WHO, UNAIDS, UNDP and Amnesty International have called for the full decriminalization of sex work as necessary to promoting sex workers’ human rights [73–76]. This study adds to prior research emphasizing the need to remove socio-legal and
psychological barriers which can restrict safer indoor sex work environments, and for labour frameworks which support the health and rights of both im/migrant and Canadian-born sex workers [22, 36, 45, 62, 77].

Acknowledgements This research is supported by the US National Institutes of Health (R01DA028648), a Canadian Institutes of Health Research Foundation Grant, and MacAIDS. SG is partially supported by NIH and a CIHR New Investigator Award. KS is partially supported by a Canada Research Chair in Global Sexual Health and HIV/AIDS and NIH. The authors wish to thank all who contributed their time and expertise to this project, particularly participants, AESH community advisory board members and partner agencies, and the AESHA team, including: Sarah Moreheart, Jennifer Morris, Brittany Udal, Sylvia Machat, Jane Li, Sylvia Machat, Rachel Nicoletti, Emily Leake, Anita Dhanoa, Alka Murphy, Jenn McDermid, Tave Cole, Jaime Adams. We also thank Abby Rolston, Peter Vann, Erin Seatter and Patricia McDonald for research and administrative support.

Funding This study was funded by the US National Institutes of Health (R01DA028648), a Canadian Institutes of Health Research Foundation Grant, and MacAIDS. SG is partially supported by NIH and a CIHR New Investigator Award. KS is partially supported by a Canada Research Chair in Global Sexual Health and HIV/AIDS and NIH.

Compliance with Ethical Standards
Conflict of interest Bronwyn McBride, Kate Shannon, Putu Duff, Minshu Mo, Melissa Braschel, Shira M. Goldenberg declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

References


Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.