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Intersectional associations between citizenship, English fluency and racialisation on access to health and sex work community services: findings from a prospective cohort of sex workers in Canada (2014–2022)

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ABSTRACT

Objectives To examine the intersectional associations between migration experiences and use of health and sex work community-based services among women sex workers.

Design Data were drawn from An Evaluation of Sex Workers Health Access, a community-based cohort of sex workers from September 2014 to February 2022. Bivariate and multivariable regression with generalised estimating equations (GEEs) using interaction terms was used to separately model associations between intersectional aspects of the migration experience (citizenship, English fluency and Asian identity) and service access outcomes.

Setting Diverse community-based sex work venues in Metro Vancouver, Canada.

Participants 652 cis and trans women sex workers, with 149 (22.8%) being immigrants/migrants born outside of Canada (n=149).

Primary outcome measures (1) Accessing health services when needed and (2) utilisation of sex work community-based services.

Results In separate adjusted multivariable GEE models, we found significantly reduced odds of accessing health services when needed for women without Canadian citizenship and with limited English fluency, as well as those lacking Canadian citizenship but speaking fluently. Significantly reduced odds of accessing health services were also found among sex workers without Canadian citizenship and who identified as Asian. Regarding using sex work community-based services, women sex workers lacking Canadian citizenship and with limited English fluency, and those who were Asian and lacked Canadian citizenship, had low odds of using sex work community-based services.

Conclusions Findings show a gradient in the relationship between intersectional experiences of lack of citizenship, limited English fluency and Asian identity on sex workers' access to health services and sex work community-based services. Culturally responsive and language-tailored services that attend to and address these intersecting forms of structural marginalisation, along with the full decriminalisation of all aspects of sex work, and the removal of punitive sex work-related immigration policies, are recommended.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Our culturally diverse sample included a sufficient subgroup of Asian-identifying immigrant/migrant sex workers, a group often under-represented in empirical research.
⇒ The longitudinal cohort design enables a robust analysis of 4087 observations from 652 participants over 8 years.
⇒ The intersectional analysis shows the complex interplay of factors associated with migration that impact service access and utilisation among Asian immigrant/migrant sex workers.
⇒ Our categorisation of Asian identity does not fully account for heterogeneity and nuances of racialisation within and across Asian communities.
⇒ Criminalisation, immigration repercussions and social desirability may have led to an under-reporting of marginalised experiences.

INTRODUCTION

Globally, sex workers face substantial barriers to accessing healthcare and support services due to criminalisation, stigma and other sociostructural inequities.[1–3] Immigrant/migrant sex workers can experience additional barriers both in Canada and globally.[4–9] Previous research shows that both temporary migrant status and lack of full citizenship may amplify health and safety concerns faced by immigrant/migrant sex workers, including reduced ability to negotiate safer sex with clients,[7] unmet health needs,[10] reduced use of HIV/sexually transmitted infection (STI) testing[11] and lower access to health

resources and government benefits during the COVID-19 pandemic.[12] In Canada, sex workers who are not Canadian citizens experience increased barriers to health and community-based services due to the complex nexus of sex work criminalisation and immigration policies. In 2014, the passage of the Protection of Communities and Exploited Persons Act (PCEPA) shifted legislation on sex work to an 'end-demand' model that criminalises clients and third parties such as managers, front desk employees and workers helping with advertising.[13] In addition, current Canadian immigration policies prohibit temporary residents (eg, work/study permit holders) from engaging in sex work,[13 14] which is the only sector of work singled out for such exclusion. Third-party criminalisation imposed by PCEPA negatively impacts the health of immigrant/migrant sex workers, as many rely on the support of third parties, such as managers, to ensure occupational safety and access health resources.[7 15]

Language barriers are a recognised barrier to accessing health and community services for immigrant/migrants, both in Canada and internationally.[16–18] A recent Canadian study with immigrant/migrants and healthcare professionals reported that the major challenges associated with limited English proficiency in accessing health services include identifying linguistically responsive health services, building alliances with healthcare professionals, locating adequate interpretation services and delayed treatments.[19] Studies with immigrant/migrant sex workers have reported similar obstacles due to linguistic marginalisation.[1 20 21]

Additionally, racial and ethnic minorities often face structural marginalisation and racialisation resulting in inequitable access to services, which may exacerbate inequities faced by immigrant/migrant sex workers of colour.[22] Under PCEPA and disproportionate immigration surveillance of immigrant/migrant sex workers and venues, Asian immigrant/migrant sex workers often face frequent profiling and targeting by antitrafficking policing due to conflation of immigrant/migrant sex work with trafficking.[23] While there has been sparse empirical attention to the ways in which Asian sex workers experience inequitable access to health and community services in Canada, prior studies have documented lower odds of participation in community organising[4] and higher odds of facing gaps in health insurance coverage[5] among immigrant/migrant sex workers.

Overall, while prior research has documented the influence of citizenship, English fluency and Asian racialised identity on health inequities and access to care among sex workers, we know little about how these migration-related experiences may jointly contribute to inequities in health and services access through an intersectional lens. Given that epidemiological studies have traditionally operationalised these as independent determinants of health, there is a critical need to examine their potential intersectional influences. Intersectionality, originating from black feminist theory, recognises how lived experiences of health and oppression are situated in and shaped by multiple overlapping social and structural systems.[24] Intersectionality integrates well with the framework of sociostructural determinants of health, which has been increasingly applied in health research to examine inequitable service access and health outcomes among marginalised communities.[1 25] The conceptualisation of health inequities from an intersectional and sociostructural perspective moves beyond the influences of biomedical factors to recognise how people's health and life conditions are impacted by the interplay of different social, economic and political systems.[25] Grounded in this theoretical foundation of health inequity, it is imperative to highlight how structural inequities can manifest themselves in distinct ways among marginalised communities. An intersectional lens on sociostructural determinants of health and service access allows for analytical attention to how sex workers' inequitable access to health and community services may vary based on the intersections of different sociocultural experiences with marginalisation and privileges. Therefore, we aimed to investigate the associations between the interactions of three migration-related factors—Canadian citizenship status, English fluency and Asian identity on outcomes of (a) access to health services when needed and (b) use of sex work community-based services, among women sex workers in Metro Vancouver over 8 years (2014–2022).

METHODS

Data collection

Data were from a community-based longitudinal open cohort study in Metro Vancouver, Canada, An Evaluation of Sex Workers Health Access (AESHA). In collaboration with sex work and community-based organisations, AESHA was developed as a community-based study in 2005[26] and launched cohort enrolment in January 2010. As previously described,[16] we used time-location sampling and outreach to recruit sex workers across diverse workspaces, including both outdoor/public, indoor and online spaces across Metro Vancouver. Study visits included interviewer-administered questionnaires and voluntary HIV, STI and hepatitis C virus (HCV) pretest and post-test counselling and testing at baseline and semi-annually. Individuals identifying as adult women (inclusive of trans identities), having exchanged sex for money and with capacity to provide written informed consent are eligible for participation. Participants completed visits at our community-based research office or a private room in the place of their choosing (eg, workplace) in English, Mandarin or Cantonese. Questionnaires were administered and managed in REDCap. Measures included sociodemographics, migration experiences, patterns and experiences of sex work, sex work conditions, and sociostructural environments, criminalisation, and HIV, STI, HCV, mental health, sexual health, and primary care needs and service access. Participants received an honorarium of $C50 for each study visit. Analyses were restricted to the study period beginning in September

2014, when we added new questions specific to migration experiences, citizenship and language barriers.

Measures

Outcome variables

All outcome measures and potential confounders were assessed as time-varying variables with recall periods in the last 6 months. Analyses examined two dichotomous outcome measures: (a) Access to health services when needed (last 6 months): Respondents were invited to use a 5-point Likert scale (always, usually, sometimes, occasionally and never) to respond to the question: How often can you get health care services when you need it? We coded the responses to create a binary outcome variable: Yes (always and usually) or No (sometimes, occasionally and never); (b) Use of sex work community-based services (last 6 months): Respondents were provided with a list of service programmes located in Metro Vancouver that primarily serve sex workers (eg, outreach programmes, drop-in centres) and selected those they had used in the past 6 months. We coded a response as Yes when the respondent selected any of the service programmes (an other option is included); if none was selected, the response was coded as No.

Intersectional migration exposures: citizenship, language and Asian identity

Citizenship and English fluency variables were treated as time-varying variables, updated during each 6-month follow-up data collection, which allowed our analysis to account for participants' changes in immigration status and potential progression in English fluency. Asian identity was assessed as a time-fixed exposure based on participant's responses at baseline. (1) No Canadian citizenship: We coded this variable as Yes when the respondent reported No to being a naturalised Canadian citizen or being born in Canada. (2) Limited English fluency: Respondents were asked how comfortable they currently felt with speaking English (very comfortable, somewhat comfortable, not very comfortable, uncomfortable and very uncomfortable). We created a binary outcome variable: Yes (not very comfortable, uncomfortable and very uncomfortable) or No (very comfortable, somewhat comfortable). (3) Asian identity: We coded this variable as Yes when the respondent self-identified as belonging to any of the following, including Chinese/Taiwanese, Vietnamese, Korean, Japanese, Thai, Filipina, Indian, Pakistani, Middle Eastern, Bangladeshi, Sri Lankan, East/Southeast Asian, Middle Eastern and South Asian.

Potential confounders

Potential confounders were identified a priori based on the literature. Time-fixed demographics included high school educational attainment (Yes vs No) and sexual minority identity (defined as any of gay, lesbian, bisexual, asexual, queer, Indigenous two-spirit and/or other non-heterosexual identitie(s); vs straight). Time-varying factors included age (in years), primary place of sex work (outdoor/public space, informal indoor venue, formal indoor venue or no sex work in the last 6 months), sex work as main source of income (Yes vs No), any non-injection drug use (Yes vs No) and unstable housing (Yes vs No). We also included whether a study visit was conducted during the COVID-19 pandemic (Yes vs No) due to the impact of COVID-19 on access to services and benefits among immigrant/migrant sex workers in Canada.[12] Given the limited number of Asian immigrants/migrants who identified as a minoritised gender identity or who worked in street/public settings, these variables were not considered in multivariable analysis due to small cell sizes.

Statistical analyses

Analyses were performed among 652 participants (4087 observations) interviewed from September 2014 to February 2022. We first calculated baseline descriptive statistics stratified by the outcome variables. For continuous variables, we calculated the median and IQR; for categorical variables, we calculated the frequencies and proportions. Statistical differences were tested using Wilcoxon rank-sum tests for continuous variables (ie, age) and Pearson's χ^2 tests (or Fisher's exact tests for small cells) for categorical variables. We used bivariate and multivariable regressions to model the association between three intersectional migration-related factors and two outcomes, using generalised estimating equations (GEEs) to account for repeated measures over multiple study visits. For each outcome, we developed separate models with the following three multiplicative interaction terms, respectively: (a) no Canadian citizenship and Asian identity, (b) no Canadian citizenship and limited English fluency and (c) Asian identity and limited English fluency. The use of multiplicative interaction terms, compared with including factors in additive models, allows us to examine the combined effects of migration-related factors on service access outcomes. This approach aligns with our intersectional lens for understanding sociostructural determinants of health. For access to health services, we were unable to perform the analysis with the interaction term of Asian racialised identity and English fluency due to insufficient sample size. Given the complex relationships between the exposures of interest, including multiplicative interaction terms enables us to understand how the effect of one exposure varies depending on another exposure. For all bivariate and multivariable analyses, we conducted complete case analysis. For GEEs with the outcome of access to health services, 15 participants were excluded due to missing values for multivariable analyses. Similarly, for the outcome of using sex work community-based services, 14 participants were excluded for multivariable analyses. We report unadjusted (OR) and adjusted ORs (aOR) with 95% CIs for bivariate and multivariable GEE analyses. We used SAS V.9.4 to perform all analyses.

Patient and public involvement

The study was guided by a community advisory board (CAB) of sex work, health and women's organisations. Sex workers and community-based organisations were meaningfully involved across the research process (ie, conceptualisation, interpretation and dissemination of research findings), including as staff, community partners and CAB members. All data collection and recruitment efforts were led by staff with deep knowledge and familiarity with sex workers' needs and realities either through lived sex work and/or front-line community experience.

RESULTS

Among 652 participants, at baseline 86.4% (n=561) had access to health services when needed, and 365 (57%) were able to use sex work community-based services. 22.8% of participants were immigrants/migrants born outside of Canada (n=149), including 8.7% who were recent immigrant/migrants arriving in Canada within the last 5 years (n=57) and 14.1% who were long-term immigrant/migrants (5+years in Canada) (n=92). One-quarter of participants (n=161) did not have Canadian citizenship, 10.1% (n=66) had limited English fluency and 22.6% (n=147) identified as Asian, of whom the majority (~95%) identified as East-Asian. There were 7.4% (n=48) who reported both having no Canadian citizenship and limited English fluency, 11.8% (n=77) who had no citizenship and identified as Asian, and 9.8% (n=64) who were both identified as Asian and having limited English fluency. The median age was 39 (IQR: 31–46). Slightly over half of the participants graduated from high school (51.5%, n=336). Close to half had experience using any non-injection drugs in the last 6 months (46.9%, n=306). About 2% of the participants were enrolled during the COVID-19 pandemic. The characteristics of the sample stratified by the outcome variables are presented in table 1.

Access to health services when needed

In bivariate GEE analysis, we documented a significant association between the respective multiplicative interaction terms—(1) Canadian citizenship status and English fluency and (2) Canadian citizenship status and Asian racialised identity—with access to health services when needed, respectively. In separate multivariable GEEs models adjusted for potential confounders, we assessed the independent relationship of each of the two multiplicative interaction terms with access to health services when needed.

Interaction term 1: Canadian citizenship status×English fluency

The adjusted odds of accessing health services when needed were significantly reduced among those with no Canadian citizenship and limited English fluency (aOR=0.46, 95%confidence interval: 0.26 to 0.80) and those with no Canadian citizenship but spoke fluent English (aOR=0.52, 95% CI: 0.28 to 0.96), compared with sex workers who had Canadian citizenship and spoke fluent English. The odds of accessing health services among those with Canadian citizenship but limited English fluency were also reduced but not statistically significant (aOR=0.88, 95% CI: 0.41 to 1.89).

Interaction term 2: Canadian citizenship status×Asian racialised identity

The adjusted odds of accessing health services among those who had no Canadian citizenship and were Asian significantly reduced (aOR=0.47, 95% CI: 0.28 to 0.77), compared with sex workers who had Canadian citizenship and were non-Asian. The odds among sex workers who had no Canadian citizenship and were non-Asian were reduced, but reduced odds were not statistically significant (aOR=0.33, 95% CI: 0.08 to 1.35). Finally, the odds among Asian sex workers who had Canadian citizenship were also reduced, and the reduced odds were marginally significant (aOR=0.65, 95% CI: 0.41 to 1.04). Additional details on GEE models are included in online supplemental additional file 1, Figure 1

The adjusted odds of accessing health services among those who had no Canadian citizenship and were Asian significantly reduced (aOR=0.47, 95% CI: 0.28 to 0.77), compared with sex workers who had Canadian citizenship and were non-Asian. The odds among sex workers who had no Canadian citizenship and were non-Asian were reduced, but reduced odds were not statistically significant (aOR=0.33, 95% CI: 0.08 to 1.35). Finally, the odds among Asian sex workers who had Canadian citizenship were also reduced, and the reduced odds were marginally significant (aOR=0.65, 95% CI: 0.41 to 1.04). Additional details on GEE models are included in online supplemental additional file 1.

Use of sex work community-based services

In bivariate GEE analysis, we identified a significant association between (1) Canadian citizenship status and English fluency, (2) Canadian citizenship status and Asian racialised identity and (3) Asian racialised identity and English fluency—with the use of sex work community-based services. We then estimated three multivariable GEE models to assess the independent relationship of each of the three multiplicative interaction terms on use of sex work community-based services. GEE models are presented in online supplemental additional file 2.

Interaction term 1: Canadian citizenship status×English fluency

Compared with sex workers who had citizenship and spoke fluent English, the adjusted odds of using sex work community-based services significantly reduced among all three subgroups: those who had no Canadian citizenship and limited English fluency (aOR=0.14, 95% CI: 0.07 to 0.31), those who had no Canadian citizenship but spoke fluent English (aOR=0.3, 95% CI: 0.17 to 0.53), and those who had Canadian citizenship but limited English fluency (aOR=0.52, 95% CI: 0.28 to 0.98). Of the three

Table 1 Baseline characteristics stratified by accessing sex worker community services and accessing health services in the last 6 months among women sex workers (N=652) in Metro Vancouver, Canada (2014–2022)

		Accessed sex worker community services in the past 6 months (baseline)			Accessed health services in the past 6 months (baseline)		
		Yes (%)	No (%)		Yes (%)	No (%)	
	Total (%)	n=365	n=286	P value	n=561	n=89	P value
Age (Median, IQR)	39 (31–46)	38 (31–46)	39 (32–46)	0.97	39 (31–46)	40 (31–45)	0.45
Race				<0.001			0.077
Asian*	147 (22.6)	121 (82.3)	26 (17.7)		118 (80.3)	28 (19)	
Non-Asian racialised	297 (45.6)	109 (36.7)	188 (63.3)		258 (86.9)	38 (12.8)	
White	208 (31.9)	135 (64.9)	72 (34.6)		185 (88.9)	23 (11.1)	
Sexual minority	293 (44.9)	182 (62.1)	111 (37.9)	0.3	248 (84.6)	45 (15.4)	0.006
Primary place of sex work				0.006			<0.001
Outdoor/public space	166 (25.5)	138 (83.1)	28 (16.9)		137 (82.5)	29 (17.5)	
Informal indoor venue	202 (30.9)	141 (69.8)	60 (29.7)		178 (88.1)	24 (11.9)	
Formal indoor venue	127 (19.5)	22 (17.3)	105 (82.7)		101 (79.5)	25 (19.7)	
No sex work†	144 (22)	57 (39.6)	87 (60.4)		133 (92.4)	10 6.9)	
Any non-injection drug use				0.09			<0.001
Yes	306 (46.9)	223 (72.9)	83 (27.1)		256 (83.4)	50 (16.3)	
Born in Canada	491 (75.3)	328 (66.8)	162 (33)	0.02	432 (88)	58 (11.8)	<0.001
Time since migration to Canada				0.006			<0.001
Non-migrant	491 (75.3)	328 (66.8)	162 (33)		432 (88)	58 (11.8)	
Recent migrant (≤5 years)	57 (8.7)	5 (8.7)	52 (91.3)		41 (71.9)	16 (28.1)	
Long-term migrant (>5 years)	92 (14.1)	28 (30.4)	64 (69.6)		78 (84.8)	13 (14.1)	
Graduated high school	336 (51.5)	154 (45.8)	181 (53.9)	0.11	282 (83.9)	53 (15.8)	<0.001
Sex work as main income†	435 (66.7)	263 (60.5)	171 (39.3)	0.21	369 (84.8)	65 (14.9)	0.001
Any unstable housing†	519 (79.6)	334 (64.4)	184 (35.5)	0.26	451 (86.9)	67 (12.9)	<0.001
Limited English fluency	66 (10.1)	56 (84.8)	10 (15.2)	0.01	50 (75.8)	16 (24.2)	<0.001
Data collected during COVID-19	14 (2.2)	11 (78.6)	2 (14.3)	0.71	13 (92.9)	1 (7.1)	0.046

The total sums of cells may not always add up to 100% due to missing data. The two outcome variables, accessing sex worker community services and accessing health services contain 1 and 2 missing values, respectively; four independent variables, primary place of sex work, any non-injection drug use, time since migration to Canada and sex work as main income, contain 13, 3, 12 and 23 missing values, respectively.
*Of all Asian respondents, ~95% were of East Asian descent.
†In the last 6 months.

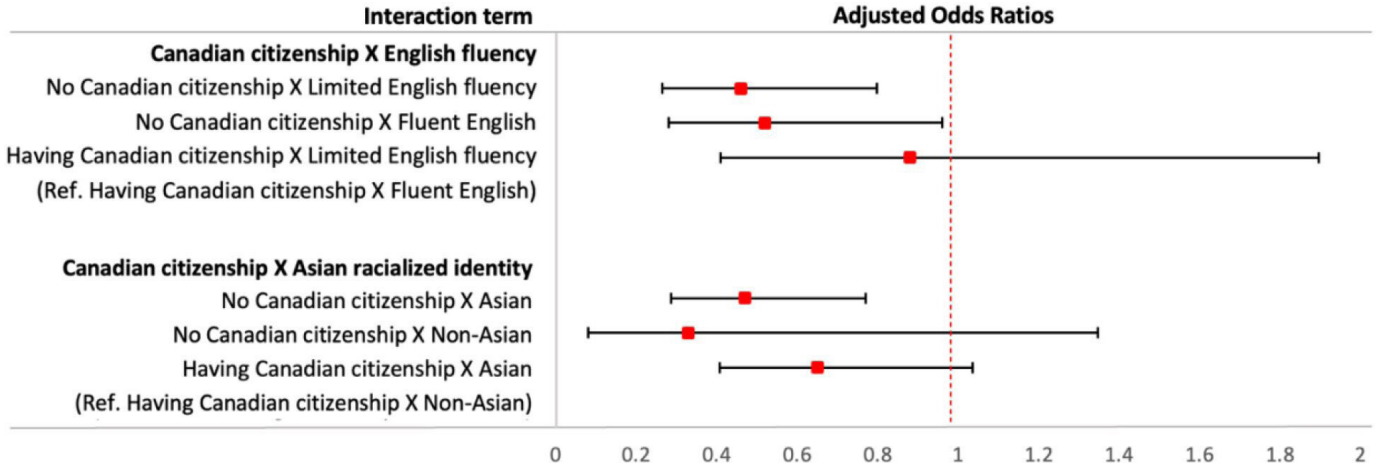

Figure 1 A forest plot of adjusted ORs for having had access to health services in the last 6 months among women sex workers (N=652) in Metro Vancouver, Canada (2014–2022). Adjusted for age, education, unstable housing, sexual minority status, non-injection drug use and whether data were collected during COVID-19.

subgroups, while all had significantly reduced odds, sex workers with no Canadian citizenship and limited English fluency had the lowest one.

Interaction term 2: Canadian citizenship status×Asian racialised identity

The adjusted odds of using sex work community-based services significantly reduced among those who were Asian with no citizenship (aOR=0.18, 95% CI: 0.11 to 0.31) and those who were Asian with Canadian citizenship (aOR=0.21, 95% CI: 0.13 to 0.36), compared with non-Asian sex workers with Canadian citizenship. The odds among sex workers who were non-Asian with no Canadian citizenship were the lowest but only marginally significant (aOR=0.10, 95% CI: 0.01 to 1.01).

Interaction term 3: Asian racialised identity×English fluency

Compared with sex workers who were non-Asian and spoke fluent English, the adjusted odds of using sex work community-based services significantly reduced among Asian sex workers with limited English fluency (aOR=0.14, 95% CI: 0.07 to 0.26) and Asian sex workers who spoke fluent English (aOR=0.26, 95% CI: 0.17 to 0.39). Of these two subgroups, Asian sex workers with limited English fluency had the lowest odds. The odds of using sex work community-based services among non-Asian sex workers

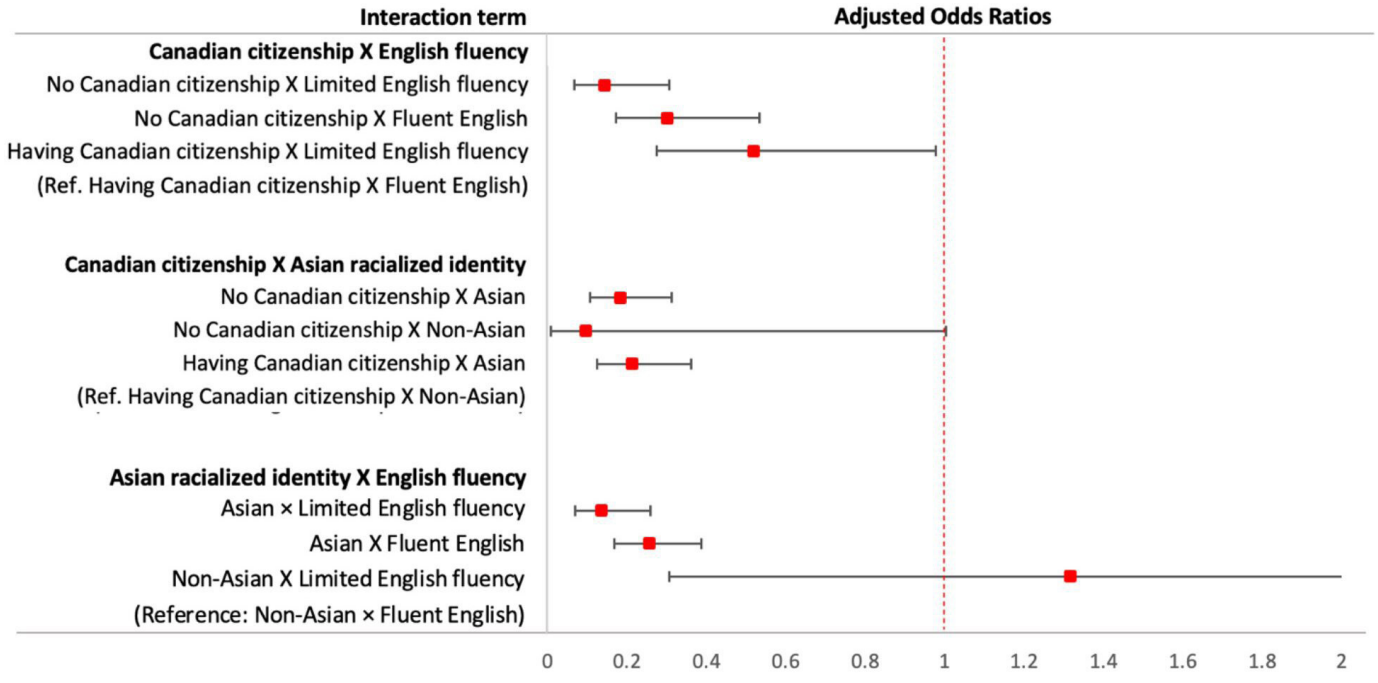

Figure 2 A forest plot of adjusted ORs for having had access to sex work community-based services in the last 6 months among women sex workers (N=652) in Metro Vancouver, Canada (2014–2022). Adjusted for age, education, unstable housing, sexual minority status, non-injection drug use and whether data were collected during COVID-19.

with limited English fluency increased, but this increase was not significant (aOR=1.32, 95% CI: 0.31 to 5.65). Additional details on GEE models are included in online supplemental additional file 2.

(Figure 2)

Compared with sex workers who were non-Asian and spoke fluent English, the adjusted odds of using sex work community-based services significantly reduced among Asian sex workers with limited English fluency (aOR=0.14, 95% CI: 0.07 to 0.26) and Asian sex workers who spoke fluent English (aOR=0.26, 95% CI: 0.17 to 0.39). Of these two subgroups, Asian sex workers with limited English fluency had the lowest odds. The odds of using sex work community-based services among non-Asian sex workers with limited English fluency increased, but this increase was not significant (aOR=1.32, 95% CI: 0.31 to 5.65). Additional details on GEE models are included in online supplemental additional file 2.

DISCUSSION

A major strength of this research is our longitudinal design, analysing 8 years of longitudinal cohort data (4087 observations from 652 participants). We used GEE to consider repeated visits among the same participants (ie, baseline and every 6-month follow-ups). Our sample size enabled us to conduct two-way interaction analyses; future research exploring more intersections simultaneously in larger samples would enable further examination of more nuanced intersectional categories. We focused on Asian identity, due to the unique cultural and linguistic needs of this group and limited existing literature on this population. The results showed a gradient in the relationship between intersectional experiences of lack of Canadian citizenship, Asian identity, and limited English fluency—and unmet need for health services and use of sex work community-based services among women sex workers in Canada. Among sex workers with Canadian citizenship, those with limited English fluency reported lower odds of accessing health services and lower odds of using sex work community services; additionally, the interaction between facing both limited English fluency and having no Canadian citizenship resulted in lower odds of using sex work community-based services and accessing health services. Similarly, among sex workers with Canadian citizenship, those identifying as Asian reported lower odds of accessing health services than their non-Asian peers; Asian sex workers with no Canadian citizenship were associated with significantly further decreased odds. Finally, for those with English fluency, compared with non-Asians, Asian women experienced fourfold lower odds of using sex work community services. These findings build on prior scholarship reporting the prominent effects of racialised identity, language barriers and immigration status on inequitable service access[5 9] and occupational health concerns (eg, client condom refusal)[7] among sex workers and extend this work by applying an intersectional lens.

While prior studies have documented the role of sociostructural factors such as stigma, discrimination and criminalisation on immigrant/migrant sex workers' health-seeking and service access,[27] our analyses build on this by highlighting the critical role of structural determinants related to intersectional migration experiences. Specifically, we reported disproportionate intersectional obstacles in accessing health services and the use of community services due to not having citizenship, limited English fluency and Asian identity. These findings highlight the inequitable structural environment produced at the nexus of prohibition on migrant sex work, racialised policing targeting Asian immigrant/migrant sex workers, and the inadequate availability of culturally responsive services. Empirical studies in Canada and elsewhere detail how multiple systems of oppression can jointly contribute to the denial of the rights to health and community support among sex workers living with marginalised identities and experiences.[7 28] For instance, a qualitative study with culturally diverse sex workers in the UK reported how the surveillance by law enforcement and health authorities over immigrant/migrant women sex workers who are visible racial minorities impacts the sex workers' health-seeking considerations; some immigrant/migrant sex workers expressed hesitation to healthcare because of the fear that immigration authorities might be notified.[28] The complex and multilayered carceral systems that Asian migrant sex workers in Canada interface regularly can contribute to a risk environment that compromises their rights to health, social and community-led services.

Further, although community-based and sex worker-specific services are a recommended best practice that address many of the health disparities faced by immigrant/migrant and non-migrant sex workers, such community initiatives often experience limited service capacity, largely due to criminalisation and limited funding support.[29] Linguistically and culturally responsive services for Asian immigrant/migrant sex workers are even more scarce. In Metro Vancouver, where there is only one community-based organisation that offers linguistically and culturally responsive programmes to Asian immigrant/migrant sex workers.[30] The lack of community-based services tailored to Asian immigrant/migrant sex workers likely explains the disconcertingly low odds of accessing sex work community services among Asian-identified sex workers in this study, especially those with no citizenship and limited English fluency. Beyond Canada, immigrant/migrant sex workers across many countries experience service gaps. A recent global systematic review documented existing gaps in sexual health support and services (eg, HIV/STI testing, sexual and reproductive health services, and safe supply access) due to the intersectional challenges of limited linguistically and culturally inclusive support, precarious immigration, criminalisation and mandatory public health reporting.[8] Health and social services and supports thus must attend

to the additional systems of oppression associated with racialisation, language barriers and precarious migration status, including by repealing laws that criminalise the sex industry, alongside discriminatory immigration policies and practices related to immigrant/migrant sex work (eg, prohibition of sexual labour for work permit holders).

Limitations

We recognise that our categorisation of the Asian racialised group identity does not fully account for the heterogeneity and nuances of racialisation within and internal diversity across various Asian communities. Our data collection outreach team spoke primarily English, Mandarin and Cantonese, which limited our scope of reach to a more diverse sample of migrant sex workers from other linguistic and cultural backgrounds. Sex work criminalisation and immigration repercussions place immigrant/migrant sex workers in a structurally precarious position, which may lead to social desirability bias resulting in under-reporting of intersectional migration experiences, which would have biased findings towards the null. This study used time-location sampling and community outreach to recruit and retain a diverse cohort of sex workers across street, indoor and online work environments, which is a strength; as a highly criminalised and marginalised population, the 'true' population of cis and trans women sex workers in Vancouver is not known, and thus results may not be generalisable to all sex workers. Given our extensive efforts to connect and refer participants to community and sexual health-related information and resources, the likelihood of accessing health and community-based services may have naturally increased over the course of participation in this cohort study, which would have led to underestimation of the gaps and inequities in service access. We conducted a complete-case analysis to handle missing data, assuming data were missing completely at random; however, this assumption may not reflect actual missingness patterns. Finally, it is possible that other policy changes occurred during the study period; for example, since the passage of PCEPA in 2014, Asian immigrant/migrant sex workers have been targeted by antitrafficking surveillance and policing; changes to the foreign caregiver programme might have also influenced immigrant/migrant women's access to services in Canada. These dynamic factors were not accounted for in our statistical modelling and, hence, should be explored in future studies.

Conclusions

Using 8 years of data from a community-based longitudinal cohort study with women sex workers in Metro Vancouver, Canada, we documented a gradient in the relationship between intersectional experiences of having no citizenship, limited English fluency and Asian racialised identity on sex workers' access to health services and sex work community-based services. The study contributes to a more nuanced understanding of the disproportionate barriers to accessing health and community services faced by women sex workers who have multiple intersecting marginalised experiences connected to migration and racialisation. The promotion of culturally responsive health service access and community support must attend to and address the intersecting forms of structural marginalisation that racialised immigrant/migrant sex workers face; full decriminalisation of all aspects of sex work and the removal of punitive sex work-related immigration policies are urgently needed.

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