Complexities of Short-Term Mobility for Sex Work and Migration among Sex Workers: Violence and Sexual Risks, Barriers to Care, and Enhanced Social and Economic Opportunities

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ABSTRACT *Despite research on the health and safety of mobile and migrant populations in the formal and informal sectors globally, limited information is available regarding the working conditions, health, and safety of sex workers who engage in short-term mobility and migration. The objective of this study was to longitudinally examine work environment, health, and safety experiences linked to short-term mobility/migration (i.e., worked or lived in another city, province, or country) among sex workers in Vancouver, Canada, over a 2.5-year study period (2010–2012). We examined longitudinal correlates of short-term mobility/migration (i.e., worked or lived in another city, province, or country over the 3-year follow-up period) among 646 street and off-street sex workers in a longitudinal community-based study (AESHA). Of 646 sex workers, 10.84 % (n=70) worked or lived in another city, province, or country during the study. In a multivariate generalized estimating equations (GEE) model, short-term mobility/migration was independently correlated with older age (adjusted odds ratio (AOR) 0.95, 95 % confidence interval (CI) 0.92–0.98), soliciting clients in indoor (in-call) establishments (AOR 2.25, 95 % CI 1.27–3.96), intimate partner condom refusal (AOR 3.00, 1.02–8.84), and barriers to health care (AOR 1.77, 95 % CI 1.08–2.89). In a second multivariate GEE model, short-term mobility for sex work (i.e., worked in another city, province, or country) was correlated with client physical/sexual violence (AOR 1.92, 95 % CI 1.02–3.61). In this study, mobile/migrant sex workers were more likely to be younger, work in indoor sex work establishments, and earn higher income, suggesting that short-term mobility for sex work and migration increase social and economic opportunities. However, mobility and migration also correlated with reduced control over sexual negotiation with intimate partners and reduced health care access, and mobility for sex work was associated with enhanced workplace sexual/physical violence, suggesting that mobility/migration may confer risks through less control over work environment and isolation from health services. Structural and community-led interventions, including policy support to allow for more formal organizing of sex work collectives and access to workplace safety standards, remain critical to supporting health, safety, and access to care for mobile and migrant sex workers.*

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INTRODUCTION

Globally, population migration and mobility* represent important determinants of health. Although women represent over half of migrants globally, there remains a paucity of information regarding the impacts of mobility and migration on women's health and safety, particularly among those working in the sex industry. Drivers of mobility and migration among women engaged in sex work are diverse and include new economic opportunities, subsistence needs, family obligations, and a desire for social mobility; some women may also engage in mobility specifically for the purposes of sex work.^{1–5}

Migration and mobility often result in substantial changes in health, working conditions, and economic and social opportunities. Migrant and mobile populations may experience changes in *health status* related to exposure to new infectious diseases, social networks (e.g., new sex partners), norms (e.g., regarding substance use and sexual behavior), and barriers to accessing healthcare;^{6–19} exposure to *new working conditions*, including unsafe work environments;^{20–22} and other *social and economic changes*, such as access to higher-paying work and new employment options as well as social and economic displacement among some populations of recent migrants (e.g., deportees).^{1,5,13,18,23,24}

Female sex workers (FSWs) are often highly mobile^{6,11,25} and experience substantial health and social inequities, including HIV, sexually transmitted infections (STIs)^{26,27} and violence.^{28–32} However, limited information is available regarding the impacts of migration and mobility on the health and working conditions of sex workers, especially in high-income countries such as Canada. Despite the significant number of women who migrate, most research pertaining to the health and safety of mobile and migrant workers in the formal and informal sectors has focused on males, including resource-extraction workers, migrant farmworkers, and truck drivers.^{7,13,33–40}

Globally, much research on migration and mobility among sex workers has focused on international migration and its impact on enhanced HIV and STI risk in low- and middle-income countries in Africa,^{23,33,41} Asia,^{2,8,9,42–45} and Latin America,^{1,5,10,46–48} whereas very limited attention has been paid to short-term mobility and migration patterns (e.g., recently living or working in other cities) and changes in working conditions, health, and safety in the context of such mobility and in higher-income countries.

Existing evidence suggests heterogeneity in the health and social consequences of migration and mobility. Among mobile and migrant sex workers, social isolation and exposure to violence (i.e., in the workplace and from intimate partners), coupled with barriers to health care access (e.g., interruption of care, limited familiarity with services), may enhance health and social vulnerabilities.^{1,5,8,22,30,45} In India, recent research has shown that mobility and violence interact, whereby working or living in other cities for short periods (i.e., <1 month or for temporary events) to access new economic and social opportunities was associated with enhanced violence and lower client condom use as

*Mobility broadly refers to the movement of populations, including temporary and circular movements, whereas migration refers to movement from one country, city, or locality to another.

compared to those who engaged in mobility for longer periods.³⁰ The researchers hypothesized that a lack of control over working conditions in destination settings, the absence of peer social networks, and social/cultural isolation increased health and safety risks, including violence and HIV/STI infection, among sex workers. In South Africa, cross-border migration facilitated increased social and economic opportunities (e.g., higher income) for sex workers as well as reduced contact with health providers and lower condom use as compared to internal migration.²³ In the European Union, where movement between countries is relatively easy, mobility and migration are common and may facilitate enhanced income as well as health risks and barriers to care. For example, a study in the UK found that migrant FSWs from Eastern Europe were younger and had a greater number of clients, but at the same time were less likely to use contraception than non-migrants, although this study did not examine recent or internal mobility patterns.⁴⁹

Ultimately, evidence suggests that the health and safety of migrant and mobile sex workers are influenced by factors at multiple levels of causation, including *structural factors* such as safety and exposure to violence (e.g., from clients and other sex partners), health care access, stigma and discrimination, and the enforcement of policies governing sex work and immigration;^{2,5,6,10,13,16,21,30,46} *interpersonal factors* such as barriers to gendered condom negotiation and risk patterns (e.g., substance use and sexual practices) of sex partners, including both clients as well as intimate partners;^{4,22,23,30,44,49} and *individual influences* such as substance use and sociodemographic factors (e.g., age).^{5,44,46,49}

In Canada, while there is substantial variation by work environments, sex workers often experience heightened vulnerabilities to HIV and STIs, drug use, and violence as well as barriers to accessing care, which have been largely attributed to structural conditions.^{32,50–53} However, these structural vulnerabilities (e.g., client and intimate partner violence) have not been previously examined in relation to recent mobility patterns despite evidence from other settings suggesting that changes in safety and social networks could result in enhanced violence for mobile FSWs. As in most settings globally, virtually all aspects of sex work (e.g., solicitation, living off the avails of prostitution) in Canada are criminalized. Recent studies from Canada and other international settings have highlighted the importance of structural factors shaping sex workers' health, including violence and criminalization.^{2,32,53–56} Yet, epidemiological evidence regarding the health and working conditions of mobile sex workers is lacking, with limited evidence on structural factors such as work environments, violence, and health risks within the context of recent migration and mobility. Moreover, whereas the vast majority of prior studies pertaining to migrant and mobile sex workers have been cross-sectional,⁴⁹ longitudinal data remain limited, which are needed to better elucidate recent and ongoing mobility patterns and their impacts on health and safety over time. Therefore, we undertook this study to longitudinally investigate structural, interpersonal and behavioral, and individual factors linked to short-term mobility and migration (i.e., engaged in sex work or lived in another city, province, or country in the past 6 months) and to investigate factors linked to short-term mobility for sex work among a cohort of female sex workers in the city of Vancouver, Canada.

METHODS

Data Collection

Data were drawn from an open prospective cohort study, An Evaluation of Sex Workers Health Access (AESHA). Between January 2010 and August 2012, 646 sex workers completed surveys and biological testing for HIV and STIs at enrolment and

on a bi-annual basis. The AESHA study was based on collaborations with sex work agencies and other community partners which have existed since 2005⁵⁷ and is monitored by a Community Advisory Board of >15 organizations. All study procedures were approved by the Providence Health Care/University of British Columbia Research Ethics Board.

Participants As previously described,⁶² eligibility criteria included self-identifying as female (including male-to-female transgender), being 14 years of age or older, having exchanged sex for money within the last 30 days, and providing written informed consent. Time-location sampling was used to recruit FSWs through outreach to street (e.g., streets, alleys) and off-street settings (e.g., online, newspaper, massage parlors, micro-brothels, other in-call locations) across Metro Vancouver. Sex work venues (strolls) were identified through community mapping⁵⁷ and updated regularly. Study participants completed questionnaires at study offices in Metro Vancouver or at their work or home location. Participants received \$40 CAD at each visit for their time, expertise, and travel.

Measures

Dependent Variable. The dependent variable, short-term mobility or migration, was defined as having engaged in sex work or lived in another city, province, or country outside of Metro Vancouver in the past 6 months. Short-term migration outside of Metro Vancouver was assessed by asking participants to list the places outside of Metro Vancouver where they had lived during the last 6 months, whereas short-term mobility for sex work was based on asking about places that participants had worked in the sex industry during the last 6 months. For both questions, all locations listed outside of Metro Vancouver (e.g., another BC city, province, or country) were coded as “yes.”

Independent Variables of Interest. Participants completed interviewer-administered questionnaires in English or Mandarin by trained interviewers and received HIV/STI testing from a project nurse. The baseline questionnaire covered sociodemographic characteristics such as age, education, birthplace, ethnicity, languages spoken, and income. Sexual risks (e.g., condom negotiation, client volume) and drug use (e.g., non-injection and injection drug use) were also measured. Inconsistent condom use was defined as responding that they “usually,” “sometimes,” “occasionally,” or “never” used a condom for vaginal or anal sex with clients (including one-time or regular clients) or non-commercial partners (vs. “always” used condoms). Client condom refusal was defined as responding that they were “always,” “usually,” “sometimes,” or “occasionally” coerced into vaginal, anal, or oral sex without a condom by clients (including one-time or regular clients) (vs. “never” coerced into unprotected sex). Condom refusal by intimate partners was defined as a “yes” response to the question, “In the last 6 months, has your intimate partner coerced you into having sex (vaginal/anal) without a condom?”

Questions on structural factors included homelessness and housing instability, health care access, and work environment in the past 6 months. Work environment covered primary places of solicitation and servicing clients, physical conditions of street and indoor venues, establishment policies, interactions with third parties (e.g., managers), police, security, city licensing, and workplace violence. Primary place of solicitation was based on the question, “In which of the following ways have solicited/hooked up with your clients?” in the last 6 months, and coded as *street/public* (e.g., street/outdoor public space), *indoor establishment* (e.g., massage/beauty

parlor, micro-brothel, bar/nightclub, crack/drug house), and *independent* (e.g., escort agency, newspaper ads, online). Primary place of servicing clients was based on the question, "In which of the following types of places have you ever serviced/taken clients?" in the last 6 months, and coded as *outdoor/public* (e.g., street, vehicle, other public areas), *informal indoor* (e.g., crack/drug house, bar, nightclub, hotel, client's place, your place, supportive housing), and *formal indoor establishment/brothel* (e.g., massage parlor, health/beauty enhancement center, micro-brothel). Violence was assessed by asking if participants experienced physical and/or sexual violence in the last 6 months by either clients or intimate partners, including abducted/kidnapped, forced unprotected sex, raped, strangled, physical assault, or assaulted with a weapon. Paid a manager was based on asking if participants had shared or had to pay a third party (e.g., manager or administrator) a percentage of their income from clients. Trafficking was defined as reporting having been trafficked/sold into sex work or traded/sold from one pimp to another in the prior 6 months. Experienced any barrier to health care access was based on the question, "In the last 6 months, what barriers to receiving health care have you experienced?" Response options indicating barriers to health care included limited hours of operation, wait times, don't know where to go, language barrier, couldn't get doctor of preferred gender, difficulty keeping appointments, jail/detention/prison, poor treatment by health care professionals (vs. no barriers).

HIV/STI Measures. Following pre-test counseling, a rapid point-of-care HIV blood-based test [INSTI test, Biolytical Laboratories Inc, Richmond, BC] was done, and reactive tests were confirmed by Western blot. Urine samples were collected for gonorrhea and chlamydia, and blood was drawn for syphilis testing. All participants received post-test counseling. STI treatment was provided by a project nurse onsite, and free serology and Papanicolaou testing were made available, regardless of study enrolment. STI/HIV infection was defined as positive for any STI (i.e., syphilis, gonorrhea, or Chlamydia) or HIV in the past 6 months.

Data Analysis

As the first step of the analysis, descriptive statistics were calculated for individual, interpersonal and structural factors, as well as HIV/STIs at baseline and were stratified by whether participants had been mobile/migrated (i.e., did sex work or lived outside of Metro Vancouver) in the past 6 months. The differences in these characteristics between those who reported any recent mobility and those who did not at baseline were assessed using the Mann-Whitney test for continuous variables and Pearson's chi-squared test (or Fisher's exact test for small cell counts) for categorical variables. Then, using generalized estimating equations (GEE) and an exchangeable correlation structure,^{58,59} we longitudinally examined correlates of short-term mobility/migration (i.e., lived or engaged in sex work outside Metro Vancouver in the past 6 months). Sensitivity analyses were also conducted to separately examine the relationship between mobility for sex work and covariates of interest (e.g., physical/sexual violence).

Bivariate and multivariate GEE analyses included data from each participant's baseline and follow-up visits and were conducted with a logit link function for our binary outcome to account for repeated measures among the same individuals. Sociodemographic characteristics were treated as fixed covariates, and all other variables (e.g., homelessness, condom use, drug use, physical/sexual violence,

barriers to health care) were treated as time-updated covariates of occurrences within the past 6 months. Variables that were a priori hypothesized to be related to short-term mobility or migration and with a significance level of $p < 10\%$ in bivariate analyses were considered for inclusion in the multivariate model. The backward model selection process was used to identify the model with the best overall fit, as indicated by the lowest quasi-likelihood under the independence model criterion (QIC) value.⁶⁰ Analyses were performed using the SAS version 9.3 (SAS, Cary, NC). All p values are two-sided.

RESULTS

The median follow-up duration was 17.7 months (interquartile range (IQR) 11.66–23.89). Of 646 FSWs, 10.84 % ($n=70$) reported short-term mobility or migration (i.e., within the last 6 months) during the study, whereas 89.16 % ($n=576$) did not. Of mobile/migrant women, 7.12 % ($n=46$) engaged in short-term mobility for sex work (i.e., engaged in sex work in another city, province, or country), and 6.66 % ($n=43$) reported short-term migration (i.e., lived in another city, province, or country) during the study period. Primary mobility/migration destinations included other BC cities ($n=30$, 4.64 %), other Canadian provinces ($n=33$, 5.11 %) and the USA or China ($n=17$, 2.63 %). One quarter of participants had moved to Vancouver from another city, province, or country in the last 5 years.

At baseline (Table 1), the median age was 34 years (IQR 28–42), and those reporting short-term mobility or migration were younger (median 29.5 vs. 34.5 years, $p=0.002$) and earned a higher monthly income (median \$3,720 vs. \$2,500 CAD, $p=0.012$) than their non-mobile counterparts. Combined prevalence of HIV and STIs was high (21.05 %), but there was no significant difference between women reporting short-term mobility or migration and their non-mobile counterparts at baseline (16.67 % vs. 21.36 %, $p=0.473$).

In bivariate GEE analysis (Table 2), women who engaged in short-term mobility or migration were more likely to experience health and structural vulnerabilities such as condom refusal by clients (odds ratio (OR) 1.76, 95 % confidence interval (CI) 1.00–3.10) and intimate non-commercial partners (OR 4.33, 95 % CI 1.54–12.13); physical/sexual violence by clients (OR 1.92, 95 % CI 1.14–3.23); homelessness (OR 2.31, 95 % CI 1.49–3.57); and experiencing barriers to health care (OR 1.79, 95 % CI 1.12–2.86).

In multivariate GEE analysis (Table 2), older age (adjusted odds ratio (AOR) 0.95, 95 % CI 0.92–0.98), soliciting clients in indoor establishments (AOR 2.25, 95 % CI 1.27–3.96), intimate partner condom refusal (AOR 3.00, 1.02–8.84), and barriers to health care access (AOR 1.77, 95 % CI 1.08–2.89) remained independently correlated with short-term mobility and migration. In a separate model examining factors associated with short-term mobility for sex work (Table 3), the same variables were significantly associated, with the exception of soliciting clients in indoor establishments and the addition of physical/sexual violence by clients (AOR 1.92, 95 % CI 1.02–3.61).

DISCUSSION

Over the course of this 2.5-year study, a substantial proportion (10.84 %) of sex workers in an urban Canadian setting had worked or lived in another city, province, or country. Mobile/migrant workers were less likely to be HIV/STI positive and were

TABLE 1 Characteristics of female sex workers (*n*=646) at baseline, stratified by short-term mobility and migration, 2010–2012

Did sex work or lived in another city, province, or country, last 6 months				
Variable	Yes (<i>n</i> =42) <i>n</i> (%)	No (<i>n</i> =604) <i>n</i> (%)	Total (<i>N</i> =646) <i>n</i> (%)	<i>p</i> value
Individual factors				
Age, (years) (median, IQR)	29.5 (25–36)	34.5 (28–42)	34 (28–42)	0.002
Average monthly income, in CAD (median, IQR)	3,720.00 (2,100.00–7,600.00)	2,500.00 (1,400.00–5,000.00)	2,600.00 (1,400.00–5,485.00)	0.012
Aboriginal ethnicity	19 (45.24 %)	217 (35.93 %)	236 (36.53 %)	0.226
HIV/STI positive	7 (16.67 %)	129 (21.36 %)	136 (21.05 %)	0.471
Injection drug use	19 (45.24 %)	243 (40.23 %)	262 (40.56 %)	0.523
Non-injection drug use	29 (69.05 %)	425 (70.36 %)	454 (70.28 %)	0.857
Interpersonal factors				
Inconsistent condom use with:				
Clients (any type)	5 (11.90 %)	109 (18.05 %)	114 (17.65 %)	0.313
Non-commercial partners	17 (40.48 %)	235 (38.91 %)	252 (39.01 %)	0.840
Condom refusal by:				
Clients (any type)	12 (28.57 %)	131 (21.69 %)	143 (22.14 %)	0.299
Intimate partners	3 (7.14 %)	8 (1.32 %)	11 (1.70 %)	0.029
Client volume per month (median, IQR)	48 (31–82)	48 (20–84)	48 (20–84)	0.395
Structural factors				
Primary place of solicitation				
Street/public (ref)	21 (50.00 %)	344 (56.95 %)	365 (56.50 %)	0.761
Indoor establishment	9 (21.43 %)	167 (27.65 %)	176 (27.24 %)	
Independent	12 (28.57 %)	93 (15.40 %)	105 (16.25 %)	0.049
Primary place of service				
Outdoor/public (ref)	22 (52.38 %)	268 (44.37 %)	290 (44.89 %)	0.363
Informal indoor establishment	9 (21.43 %)	159 (26.32 %)	168 (26.01 %)	
Brothel/quasi-brothel	11 (26.19 %)	177 (29.30 %)	188 (29.10 %)	0.466
Homelessness	25 (59.52 %)	174 (28.81 %)	199 (30.80 %)	<0.001
Moved to another part of town because felt unsafe	7 (16.67 %)	53 (8.77 %)	60 (9.29 %)	0.098

TABLE 1 (Continued)

	Did sex work or lived in another city, province, or country, last 6 months			
Physical/sexual violence by:				
Clients (any type)	13 (30.95 %)	141 (23.34 %)	154 (23.84 %)	0.263
Intimate partners	12 (28.57 %)	127 (21.03 %)	139 (21.52 %)	0.250
Paid a third party	15 (35.71 %)	169 (27.98 %)	184 (28.48 %)	0.283
Trafficked or traded	0 (0.00 %)	7 (1.16 %)	7 (1.08 %)	1.000
Experienced any barrier to health care access	34 (80.95 %)	378 (62.58 %)	412 (63.78 %)	0.017

All variables refer to the last 6 months, with the exception of age and Aboriginal ethnicity
All measures refer to n (%) unless otherwise noted

TABLE 2 Factors longitudinally associated with short-term mobility and migration among female sex workers (*n*=646) over time, 2010–2012

Variable	Unadjusted odds ratio	Unadjusted 95 % confidence interval	Adjusted odds ratio	Adjusted 95 % confidence interval
Age, per year older	0.94	0.91–0.97	0.95	0.92–0.98
HIV/STI seropositive	0.32	0.15–0.67		
Condom refusal by:				
Clients (any type)	1.76	1.00–3.10		
Intimate partners	4.33	1.54–12.13	3.00	1.02–8.84
Primary place of solicitation				
Street/public (ref)				
Indoor establishment	1.84	1.07–3.16	2.25	1.27–3.96
Independent	1.23	0.67–2.24	1.34	0.73–2.45
Homelessness	2.31	1.49–3.57		
Physical/sexual violence by:				
Clients (any type)	1.92	1.14–3.23	1.55	0.88–2.72
Intimate partners	1.21	0.70–2.09		
Paid a third party	3.19	1.98–5.14		
Experienced any barrier to health care access	1.79	1.12–2.86	1.77	1.08–2.89

All variables refer to the last 6 months, except for age, which was treated as a time-fixed covariate

more likely to be younger, work in indoor establishments, and earn higher income, indicating that short-term mobility/migration may increase social and economic opportunities for sex workers. At the same time, short-term mobility/migration was linked to violence and sexual risks, including reduced control over condom

TABLE 3 Factors longitudinally associated with recent mobility for sex work among female sex workers (*n*=646) over time, 2010–2012

Variable	Unadjusted odds ratio	Unadjusted 95 % confidence interval	Adjusted odds ratio	Adjusted 95 % confidence interval
Age, per year older	0.92	0.88–0.96	0.94	0.90–0.98
HIV/STI seropositive	0.30	0.12–0.76		
Condom refusal by:				
Clients (any type)	1.88	0.95–3.70		
Non-commercial partners	5.55	1.90–16.20	3.48	1.17–10.38
Primary place of solicitation				
Street/public (ref)				
Indoor establishment	1.21	0.58–2.52	1.54	0.70–3.37
Independent	1.60	0.87–2.95	1.85	0.98–3.50
Homelessness	2.69	1.63–4.44		
Physical/sexual violence by:				
Clients (any type)	2.61	1.45–4.67	1.92	1.02–3.61
Intimate partners	1.70	0.94–3.09		
Paid a third party	2.50	1.37–4.56		
Experienced any barrier to health care access	2.36	1.31–4.27	2.18	1.17–4.08

All variables refer to the last 6 months, except for age, which was treated as a time-fixed covariate

negotiation with intimate partners; mobility for sex work was also associated with enhanced workplace violence, which may be related to reduced control over one's work environment in destination settings.

These findings are supported by a systematic review documenting that migration to higher-income European countries conferred protection against HIV among sex workers,⁶ although the timing of migration and internal mobility were not assessed within this review. These results are also supported by research with indoor sex industry workers in British Columbia and Alberta, which has found that although exotic dancers who work as independent contractors are often younger and have increased earning potential as a result of flexibility in working in different venues,⁶¹ they are often exposed to poorly maintained workplaces and receive inadequate security or support from management and booking agents.⁶¹

Women in this study reported high levels of workplace violence and barriers to condom negotiation, with migrant/mobile women experiencing threefold higher odds of intimate partner condom refusal. Whereas previous studies have documented enhanced vulnerabilities of mobile sex workers to unprotected sex with clients,^{8,30,45} our findings provide unique evidence regarding the crucial role of intimate partners in shaping HIV/STI risks for this population. Although further research is needed to ascertain why mobile sex workers were more likely to experience intimate partner violence and barriers to condom negotiation with these partners, this may be explained by reduced access to social support in mobility/migration destinations, or it may be that mobility itself could be influenced by intimate partners themselves (e.g., mobility to flee intimate partner violence). Future mixed methods research is needed to understand and develop interventions to address condom refusal and violence by intimate partners and clients among mobile FSWs. This study also found that mobility for sex work related to an increased risk of client violence, which is supported by a research from India where a greater degree of mobility was associated with physical violence by clients,⁸ and mobility and violence interacted to increase the risk of HIV infection.³⁰

To the best of our knowledge, this study provides the first longitudinal evidence regarding patterns of violence and mobility among sex workers in higher-income settings. Further research is needed to understand the broader structural factors that place mobile women at elevated risk of violence and health risks, such as limited social networks or poor access to information regarding working conditions in new settings.⁶¹ In Canada^{31,32,50–53,62} and elsewhere,^{2,29,56,63–65} the criminalization of sex work has been linked to HIV/STI risk and violence—for example, police arrest and harassment of sex workers have been found to displace women to isolated settings where they are vulnerable to client condom refusal and violence, and are less likely to access healthcare and social supports.^{51,66} However, the extent to which law enforcement practices may be driving mobility and related impacts on the health and safety of mobile/migrant sex workers remains poorly understood and requires further research in light of additional concerns for migrant workers around immigration status, cultural norms, and language barriers to accessing police protections. In light of upcoming legislative changes to Canada's sex work laws (e.g., potential criminalization of clients), further evaluation of the impacts of shifting legal environments surrounding sex work for mobile women in the sex industry remains critical to inform safer workplace policies and practices.

Lastly, short-term mobility/migration was linked to reduced health care access. Previous studies from Canada, Mexico, and the USA have found that mobile populations frequently experience difficulty accessing conventional health and social

services, both during mobility as well as in migrants' destination settings.^{1,67–69} This may be due to limited familiarity with local health systems and services, stigma and discrimination, inconvenient or limited hours of operation, and language and insurance-related barriers.^{1,67–69} To inform ongoing public health programs to improve access to care for marginalized populations in Canada and internationally, including support for violence and efforts to scale-up the “cascade of care” for HIV and STIs for sex workers, further research to reduce the gap in access for mobile and migrant populations remains critically needed.

Strengths and Limitations

As the study from which these findings were generated was not designed to investigate the health consequences of migration and mobility, future research is needed to understand the complexities of migration and mobility-related risks and protective factors, particularly as they relate to violence and sexual risk. Studies that gather detailed information regarding the diverse contexts surrounding recent migration and mobility (e.g., drivers of mobility for sex work, mobility patterns, and duration over time) as well as the timing and nature of health-related risks are needed to explore pathways and contexts of risk and risk mitigation. As this study is focused on a transient and largely “hidden” population, it is possible that more vulnerable populations of migrant sex workers and those who are more highly mobile may be under-represented. Future longitudinal and mixed methods studies with larger populations of migrant and mobile sex workers are recommended to better elucidate the context of risk and risk mitigation within the context of mobility and migration.

Implications for Interventions

In conjunction with biomedical and behavioral approaches (e.g., condom promotion), community empowerment (e.g., sex worker collectivization, peer-based delivery of services, and sharing of information) has been key for achieving reductions in sexual risk and improved working conditions in many settings, notably India and the Dominican Republic.^{27,70–74} Tailored interventions for mobile/migrant sex workers that incorporate community organizing and sex worker-led strategies are recommended to reduce isolation; improve control over working conditions; and link women to health, HIV/STI prevention, and social supports. This could include peer-based outreach to link migrant/mobile FSWs to low-barrier health and social services in mobility destinations and facilitate the sharing of health and safety information (e.g., regarding the structure of sex work and safety risks in mobility destinations). Such interventions are promising for migrant/mobile sex workers due to their ability to reduce social isolation, which is a critical determinant of health for mobile populations.^{11,13,75}

Critical to supporting access to safer workplace standards, both for the general population of sex workers as well as for migrant/mobile women, is the ability of sex workers to more formally collectivize and share information. Supporting this process will continue to be critical for violence and HIV/STI prevention for sex workers in Canada, as it has been in low- and middle-income countries.^{27,76} By facilitating changes in policy and working conditions, such collectivization would enhance opportunities to access safe and healthy work environments for all women in the sex industry, including highly mobile and migrant populations.

CONCLUSIONS

In this cohort study, short-term mobility/migration related to enhanced sexual and safety risks as well as increased social and economic opportunities. There is a need for future migrant health and sex work research to be guided by a broader conceptualization of the diverse (i.e., protective as well as risky) and often complex impacts of migration and mobility on health, safety, and working conditions. The sexual and safety vulnerabilities identified suggest the critical need to develop and evaluate interventions to reduce violence and sexual risks and improve access to healthcare for mobile and migrant women in the sex industry. Tailored, peer-based interventions to reduce isolation and improve mobile/migrant sex workers' control over their working conditions are needed, alongside efforts to link women to health and social supports.

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