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Barriers to Governmental Income Supports for Sex Workers during COVID-19: Results of a Community-Based Cohort in Metro Vancouver

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Abstract: The COVID-19 pandemic has brought into stark focus the economic inequities faced by precarious, criminalized and racialized workers. Sex workers have been historically excluded from structural supports due to criminalization and occupational stigma. Given emerging concerns regarding sex workers' inequitable access to COVID-19 income supports in Canada and elsewhere, our objective was to identify prevalence and correlates of accessing emergency income supports among women sex workers in Vancouver, Canada. Data were drawn from a longstanding community-based open cohort (AESHA) of cis and trans women sex workers in Metro Vancouver from April 2020–April 2021 (n = 208). We used logistic regression to model correlates of access to COVID-19 income supports. Among 208 participants, 52.9% were Indigenous, 6.3% Women of Colour (Asian, Southeast Asian, or Black), and 40.9% white. Overall, 48.6% reported accessing income supports during the pandemic. In adjusted multivariable analysis, non-injection drug use was associated with higher odds of accessing COVID-19 income supports (aOR: 2.58, 95% CI: 1.31–5.07), whereas Indigenous women faced reduced odds (aOR 0.55, 95% CI 0.30–1.01). In comparison with other service workers, access to income supports among sex workers was low overall, particularly for Indigenous sex workers, demonstrating the compounding impacts of colonization and disproportionate criminalization of Indigenous sex workers. Results highlight the need for structural supports that are low-barrier and culturally-safe to support sex workers' health, safety and dignity.

Keywords: sex work; women sex workers; trans sex workers; COVID-19 pandemic; basic income; structural interventions; Indigenous

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1. Introduction

The COVID-19 pandemic dramatically impacted the livelihoods of workers around the globe, particularly service workers and care workers, precarious, informal and criminalized workers. The sudden loss of or reduction of work paired with inequitable access to emergency financial supports or inadequate availability of emergency supports was felt most by the working class, Black, Indigenous and People of Colour (BIPOC) and im/migrant (immigrant and migrant) communities, and lower-income workers, including many sex workers (Native Women's Association of Canada 2020; Taylor et al. 2020; Benoit 2020). The COVID-19 pandemic brought into stark focus the urgent need to address the unmet occupational needs of sex workers—particularly BIPOC, im/migrant and more marginalized workers—and has further highlighted the severe impacts of stigma, criminalization, and systemic racism on sex workers' access to income and related supports (Lam 2020b; NSWP and UNAIDS 2020).

Throughout the pandemic, sex workers experienced severe income losses, housing precarity, and greater risk of violence while working in isolation (Taylor et al. 2020; Amnesty International and Clamen 2020). For BIPOC and im/migrant sex workers, these experiences, in addition to increased discrimination and targeted policing, have been exacerbated by systemic racism (processes of racism that are embedded in laws, policies, and practices of society) (Butterfly: Asian and Migrant Sex Worker Support Network 2020; Lam 2020a; Raguparan 2022). Lockdown restrictions left streets especially barren, making sex work at night increasingly dangerous for street-based sex workers (Taylor et al. 2020). Sex workers reported declines in access to HIV/STI testing and care during the COVID-19 pandemic, and a number of outreach services have been either temporarily curtailed or have had to adapt their approaches (Benoit and Unsworth 2022; NSWP and UNAIDS 2020). Sex workers, like other service, care and in-person workers were either forced to stop working to protect themselves and others, or faced the choice of continuing to work and risk COVID-19 transmission to make ends meet. In many countries (including Spain, Japan, Chile, Turkey, and Canada), a makeshift solution to the global crisis came in the form of emergency financial support, however like other forms of occupational protections in criminalized settings, sex workers were likely to face exclusion from such assistance.

Within the first weeks of the COVID-19 pandemic in Canada in March 2020, the federal government launched the Canada Emergency Response Benefit (CERB)—emergency financial support aimed at workers who lost income due to the pandemic, consisting of $1200–$2000 (CAD) monthly payments from 15 March 2020 to October 2020. CERB was available for "individuals residing in Canada; at least 15 years old; who had stopped working or had been working reduced hours due to COVID-19; who did not expect to earn over $1000 for at least 14 days in a row during a four-week period; who had employment or self-employment income of at least $5000 in 2019 (confirmed via 2019 tax filing); and who had not quit their job voluntarily" (Government of Canada 2020). Workers could apply for CERB via a governmental website or over the phone and needed an account with the Canada Revenue Agency. It was also communicated that individuals who were later deemed ineligible for CERB may be asked to repay any funds received.

The rigid requirements of Canada's COVID emergency income supports immediately raised concern within the sex work community, and the implications of such barriers have been documented by advocacy organizations throughout the pandemic (Amnesty International and Clamen 2020). Canada's sex work laws make it so that sex workers remain precarious and largely criminalized workers, without occupational supports. After previous sex work laws were deemed unconstitutional for violating sex workers' rights, the federal government implemented 'end-demand' criminalization (the Protection of Exploited Persons and Communities Act) in 2014, which took aim at the demand for sex work—criminalizing purchasing and many third party activities surrounding the sex industry, but leaving its sale legal under very narrow circumstances (Government of Canada 2014). This approach, adopted by an increasing number of global jurisdictions, deems sex workers as victims of violence, rather than workers. This inaccurate framing is based on the conflation of sex work with trafficking, restricting sex workers' freedoms under the guise of their protection and has severe consequences for sex workers' occupational conditions (Machat et al. 2019). In a long overdue review of these laws, the House of Commons recommended in June 2022 that client criminalization and the criminalization of third parties be upheld (Standing Committee on Justice and Human Rights 2022). Such recommendations fail the needs of sex workers by maintaining the framing of clients and third parties as perpetrators, and sex workers as victims rather than workers. Echoing community calls-to-action, there is a timely need to understand the ramifications of sex work criminalization during a global pandemic and beyond, including sex workers' access to emergency income supports.

In recognizing sex work as not an inherent site of violence or health "risk", but rather a legitimate form of labour, our analysis is based on the understanding that sex work occupational health and safety is shaped not only by criminalization, but by gender in-

equity, colonialism as well as capitalism, and conditioned by work environments. This analysis therefore aims to centre the diversity in lived experience and the interplay between structural, community and individual factors (Shannon et al. 2015; Crago et al. 2021; Bingham et al. 2014; Raguparan 2017; Krüsi et al. 2016; Deering et al. 2014; Lyons et al. 2017). We utilized a structural determinants of health framework (Shannon et al. 2015), which understands sex work occupational health and safety risks or protective factors operating at macrostructural, community, and work environment levels. Macrostructural determinants include social, economic, and health-related policies governing sex work and sex workers including punitive sex work laws; criminalization of illicit substances; immigration law, globalization and migration; political economic structures (e.g., capitalism); colonialism and other manifestations of systemic racism; patriarchy, transphobia and heteronormativism; and stigmas including sex work stigma, drug use stigma and anti-poverty stigma. Community levels include community empowerment models, sex work collectivization, or leadership. Work environment levels include physical, social, policy, and economic features, such as venue-based policies, violence, and policing. Also drawing on intersectional feminist theory (Collins 1986; Crenshaw 1989), this analysis acknowledges the ways that various structural determinants, including patriarchy, racism and colonialism, intersect and compound, acting iteratively and dynamically with community and work environment-level factors to shape sex workers' occupational health, safety and well-being including sexual health and physical safety, but also financial security and access to resources.

Previous research has highlighted the ways sex work and substance use criminalization, stigma, and other macrostructural factors (e.g., colonialism and other manifestations of structural racism) hinder the health, safety and wellbeing of sex workers, particularly BIPOC and im/migrant workers, by severely restricting their access to health and social services (Argento et al. 2020; Goldenberg et al. 2020a; McBride et al. 2022; Crago et al. 2021; Goldenberg et al. 2022; Shannon et al. 2008). Sex work communities and researchers have discussed the impacts of structural determinants on sex workers' experiences during the pandemic at the macro level, including im/migration policy and sex work laws; the community level, such as interruptions in service delivery; and work environment level, including increased isolation or workplace closures. (Amnesty International and Clamen 2020; Benoit 2020; McBride et al. 2022; Taylor et al. 2020; Lam 2020a). However, limited quantitative evidence has examined the role of such factors in shaping access to income supports among sex workers during the COVID-19 pandemic.

Macrostructural experiences of colonialism and systemic racism have led to the overrepresentation of Indigenous women in street-based sex work (Bingham et al. 2014). Colonization's role in sex work criminalization and policing has resulted in specific and direct harms for Indigenous women, girls and gender non-binary people specifically (Hunt 2015). Research has documented experiences of state-sanctioned violence against Indigenous sex workers (Bingham et al. 2014; Thumath et al. 2021) and ways that anti-Indigenous racism intersects with discrimination against sex workers to block Indigenous sex workers' access to colonial structural supports (Krüsi et al. 2016; Crago et al. 2021). The In Plain Sight report released during the pandemic has documented the ways that Canada's current systems of care continue to harm Indigenous people (Government of British Columbia 2020). While research has highlighted the disproportionate social and economic impacts of the COVID-19 pandemic on marginalized and racialized communities, including Indigenous women (Arriagada et al. 2020; Native Women's Association of Canada 2020), little empirical research has explored potential inequities in access to income supports and other COVID-19 supports among Indigenous women who do sex work.

Also, preceding and overlapping with COVID-19, high rates of drug toxicity and illicit drug overdoses represent a pressing health and social concern that disproportionately impact sex workers who use drugs (Goldenberg et al. 2020b; Lavalley et al. 2021). For sex workers who use drugs, a high burden of policing and criminalization are linked to barriers to health services, physical and sexual workplace violence, and increased odds

of non-fatal overdose (Goldenberg et al. 2020b). Ongoing criminalization of drug use, as well as stigma surrounding both drug use and sex work can hinder sex workers' ability to access supports and increases the risks of drug toxicity, including overdose (Goldenberg et al. 2020b; Lavalley et al. 2021). The COVID-19 pandemic has brought to bear the ongoing health, social and labour inequities faced by sex workers due to criminalization. Similarly, the ongoing drug toxicity and overdose crisis has disproportionately affected marginalized communities including sex workers and Indigenous women (First Nations Health Authority 2021). The impacts of these dual epidemics have highlighted the need for further research and evidence-based interventions that support sex workers' health, safety and access to services and supports.

In the context of the ongoing criminalization of sex work, in which sex workers are repeatedly dismissed as undeserving of occupational protections, there is a particularly timely need to examine sex workers' access to income supports throughout dual pandemics, and how access is shaped by intersecting structural factors. Inspired by community discourse and growing literature capturing the inequities faced by sex workers during the pandemic, the objective of this study was to identify prevalence and correlates of accessing emergency income supports (i.e., Canada Emergency Response Benefit, CERB) among women sex workers in Vancouver, Canada.

2. Materials and Methods

2.1. Study Design

This study is nested within an ongoing community-based open prospective cohort, An Evaluation of Sex Workers Health Access (AESHA) which initiated recruitment in 2010 and is based on community collaborations since 2005. In order to capture the unique experiences of women sex workers and the ways that sex workers' occupational health and safety is also shaped by patriarchy and gender-based violence, eligibility at baseline include identifying as a woman/femme while working[1], exchanged sex for money in the last month, aged 14+, and able to provide written informed consent (Shannon et al. 2007). Time-location sampling supported recruitment through daytime and late-night outreach to outdoor (i.e., streets, alleys), indoor settings (i.e., massage parlours, micro-brothels, hotels, bars) and online solicitation spaces across Metro Vancouver. Since inception, current/former sex workers are hired throughout the project, from interviewers/outreach workers and sexual health research nurses to coordinators. Further detail on AESHA's origins is available elsewhere (Shannon et al. 2007).

After obtaining informed consent, participants completed interviewer-administered questionnaires at baseline and semiannual follow-up visits. This study drew on cross-sectional data from the main AESHA questionnaire (eliciting responses on individual characteristics, work environments, community-level and structural factors, and health access and outcomes), and a supplementary COVID-19 questionnaire which was implemented in April 2020. The COVID-19 questionnaire was collaboratively developed by AESHA's research and frontline teams, including experiential staff, and informed by community discourse and participant narratives during the first month of the pandemic. The questionnaire explored pandemic impacts on housing and economic factors; work environment; safety, violence and policing; and social outcomes. Given the challenges of connecting with sex workers during COVID-19 lockdowns, closures, and service disruptions, we were able to reach a relatively small sample of the AESHA cohort from April 2020–April 2021, with East Asian, South East Asian and Black sex workers (women of colour) underrepresented. Interviews were conducted via phone or at study offices in Vancouver or a confidential space of participants' choice (e.g., home, work). Data are securely collected and managed using REDCap (Harris et al. 2009) electronic data capture tools hosted at the University of British Columbia. All participants received $40 CAD at each biannual visit, plus an additional $20 for the COVID-19 supplementary questionnaire. The study holds ethical approval through the Providence Health Care/University of British Columbia Research Ethics Board.

2.2. Study Variables

Our study utilized a comprehensive selection of study variables that include macrostructural, community, and work environment levels, to identify the structural conditions linked to sex workers 'access to income supports. Study variables derived from the main AESHA questionnaire are based on longstanding longitudinal cohorts with sex workers and people who use drugs (Shannon et al. 2007, 2008, 2009), and have been derived in line with our current theoretical framework. Factors such as 'intimate partner violence' and 'social cohesion' are measured using standardized scales. Over time, other measures have been adapted or developed where needed based on feedback from experiential staff and community.

Our primary outcome "accessed COVID emergency income supports" was defined as responding "Have received" to "Canada Emergency Response Benefit (CERB)" when asked, "Since the COVID-19 pandemic began in BC in March 2020, which of the following government supports have you accessed to reduce the negative effects of COVID-19/keep you safe at this time?"

Selection of potential explanatory variables and exposures related to COVID emergency income supports access was informed by our theoretical framework. Individual-level variables included age, as well as substance use variables capturing experiences in the last six months (any non-injection drug use (excluding alcohol and cannabis) and any injection drug use). Macrostructural variables included race and Indigenous identity to examine the effects of colonization and racism defined as Indigenous (inclusive of First Nations, Métis, or Inuit), Women of Colour (e.g., Black, East Asian, Southeast Asian) vs. white. Given the low proportion of participants who identified as Black in our sample, we combined Black and Women of Colour (WOC) to examine effects of racialization among this group. We also considered mental health diagnoses, high school attainment, im/migration to Canada, sexual minority identity (gay, lesbian, bisexual, asexual, queer, other vs. heterosexual), and gender identity (cis women vs trans women, including, transgender women, transexual women and other transfeminine identities). Other structural variables included lifetime experiences of incarceration (ever spent time in jail or prison overnight or longer), and currently residing in Vancouver's Downtown Eastside (DTES)[2]. All remaining structural variables from the main AESHA questionnaire captured experiences in the last 6 months, including; any unstable housing (i.e., living in an SRO, with family or friends, supportive housing, etc. vs. living in own apartment/house).

Community variables included accessing sex work-specific services in Metro Vancouver (e.g., mobile outreach, drop-in spaces led by or tailored to sex workers), and having engaged, volunteered or worked with any community organizations, (including sex work and harm reduction organizations, but also women's organizations, Indigenous community organizations, etc.). Additionally, we captured primary place of service in the last six months (work environment level), including outdoor/public (e.g., street, public washroom, car, tent), and informal or formal indoor spaces (e.g., sauna/steam bath, bar/nightclub, own or client's place of residence, massage/beauty parlour, micro-brothel). This variable included a category for no recent sex work, as not all participants do sex work at every semi-annual study visit, as well, many participants stopped sex work during the pandemic.

Variable selection and interpretation also utilized an interdependence approach informed by emerging feminist, anti-capitalist and post-colonial "communities of care" political economy theory to analyze the relationship between structural supports on individual's and community's ability to meet their social, material, and emotional needs (Care Collective et al. 2020). Descriptive variables explored from the COVID-19 supplementary questionnaire captured self-reported changes experienced since the pandemic began in BC in March 2020. Factors related to financial security included negative changes to food security (defined as any: Reduced/no supply, higher prices, difficulty meeting new registration requirements at food banks, Service/centre where you normally access food is closed), negative changes to economic situation, excluding sex work (defined as any: having been laid off, voluntarily quit job due to health concerns, forced to work fewer hours or fewer shifts, person you rely on financially lost income, etc.), reduced income from in-person

sex work (defined as any: Decided to stop working completely, Switched to or did more online/phone sex work, Reduced potential client volume, Clients cancelling, Only seeing regular/long-term clients to reduce potential COVID-19 exposure), and stopping sex work completely during the pandemic. Finally, as participants were asked about changes since the COVID-19 pandemic began in BC in March 2020, interview month was included as an adjustment variable in all analyses.

2.3. Statistical Analysis

Descriptive statistics for demographic and structural characteristics were calculated as frequencies and proportions for categorical variables and measures of central tendencies (i.e., median and interquartile range (IQR)) for continuous variables. These were stratified by access to COVID emergency income supports and compared using Pearson's chi-square test for categorical variables (or Fisher's exact test in the case of small cell counts) and the Wilcoxon rank-sum test for continuous variables.

Bivariate and multivariable analyses used logistic regression to examine associations with access to COVID emergency income supports. Hypothesized explanatory variables were considered for inclusion in the multivariable explanatory model if they were associated at $p < 0.20$ in bivariate analysis. Beginning with the full model, the model with the best overall fit as indicated by the lowest Akaike information criterion (AIC), was determined using a manual backward elimination process. Statistical analyses were performed in SAS version 9.4 (SAS, Cary, NC, USA), and all p-values are two-sided. Statistical significance was defined as $p < 0.05$.

3. Results

Analyses included 208 sex workers in Metro Vancouver interviewed between April 2020–April 2021. Participants' median age was 45 (IQR 36–52) (Table 1). More than half (52.9%, n = 110) were Indigenous, while 6.3% (n = 13) identified as Women of Colour (specifically Asian, Southeast Asian and Black), and 40.9% (n = 85) were white. 7.7% (n = 16) were im/migrants to Canada. Overall, 44.2% (n = 92) identified as a sexual minority and 11.5% (n = 24) identified as trans women. Over this study covering the first year of the COVID-19 pandemic, 48.6% (n = 101) of all participants reported having accessed COVID emergency income supports. Among Indigenous and women of colour participants, 42.7% and 46.2% reported having accessed COVID emergency income supports, respectively, compared to 56.5% of white participants. Overall, 43.3% reported being ineligible for at least one type of COVID emergency support (including the CERB but also rental rebates, child care benefits, provincial workers' benefits etc.), and 17.3% reported they lacked the resources to apply for such supports. 17.8% (n = 37) of all participants serviced clients in outdoor or public spaces while 43.3% (n = 90) serviced clients in formal/informal indoor spaces. More than two-thirds (68.8%, n = 143) reported using non-injection drugs in the last six months, and 33.7% (n = 70) reported living in Vancouver's DTES. Almost a quarter (22.6%, n = 47) reported recently engaging, volunteering or working with community organizations (including sex work and harm reduction organizations). A smaller subsection of the AESHA cohort was also asked about access to a bank account. Of the 76 sex workers asked about banking, only a small majority (n = 45, 59.2%) reported having a bank account.

3.1. Self-Reported Changes during COVID-19

When asked about experiences since the COVID-19 pandemic, 15.4% (n = 32) of participants reported negative changes to their economic situation (excluding sex work), while 71.6% (n = 149) reported reduced income from in-person sex work. 23.6% (n = 49) reported that they stopped doing sex work since the onset of the pandemic. More than half of participants (56.7%) (n = 118) reported negative changes to food security during the pandemic (Figure 1).

Table 1. Characteristics stratified by access to COVID income supports among women sex workers in Metro Vancouver, Canada, AESHA, April 2020–April 2021 [*n* = 208].

Characteristic	Total (%) (*n* = 208)	Accessed COVID Emergency Income Supports		*p*-Value
		Yes (%) (*n* = 101)	No (%) (*n* = 107)	
Age (median, IQR)	45 (36–52)	45 (36–52)	45 (36–52)	0.737
Month of COVID Interview (median, IQR)	August 2020 (June–November 2020)	August 2020 (July–December 2020)	July 2020 (May–September 2020)	<0.001
Non-injection drug use †	143 (68.8)	83 (82.2)	60 (56.1)	<0.001
Injection drug use †	83 (39.9)	47 (46.5)	36 (33.6)	0.129
Macrostructural level				
Sexual Minority *	92 (44.2)	46 (45.5)	46 (43.0)	0.711
Trans women (vs. cis women) **	24 (11.5)	9 (8.9)	15 (14.0)	0.249
High school attainment	98 (47.1)	47 (46.5)	51 (47.7)	0.871
Mental health diagnosis	162 (77.9)	83 (82.2)	79 (73.8)	0.138
Racialization				
White	85 (40.9)	48 (47.5)	37 (34.6)	Reference
Indigenous	110 (52.9)	47 (46.5)	63 (58.9)	0.058
Women of Color	13 (6.3)	6 (5.9)	7 (6.5)	0.161
Im/migrated to Canada	16 (7.7)	7 (6.9)	9 (8.4)	0.689
Living in the Down Town Eastside ±	70 (33.7)	38 (37.6)	32 (29.9)	0.402
Any unstable housing †	181 (87.0)	93 (92.1)	88 (82.2)	0.164
Lifetime incarceration	170 (81.7)	89 (88.1)	81 (75.7)	0.021
Community level				
Accessed sex work outreach programs †	97 (46.6)	50 (49.5)	47 (43.9)	0.673
Engaged/volunteered/worked with any community organization †	47 (22.6)	21 (20.8)	26 (24.3)	0.338
Work Environment level				
Primary place servicing clients †				
Outdoor or public space	37 (17.8)	19 (18.8)	18 (16.8)	
Indoor space (formal or informal)	90 (43.3)	45 (44.6)	45 (42.1)	
No recent sex work	66 (31.7)	34 (33.7)	32 (29.9)	0.980

All data refer to *n* (%) of participants, unless otherwise specified: * Gay, lesbian, bisexual, asexual, queer; ** Trans women inclusive of transgender women, transexual women and other transfeminine identities vs cisgender women; † In the last 6 months; ± The Downtown East Side (DTES), a neighbourhood within the City of Vancouver characterized by both social and economic inequities as well as significant community organizing and low-threshold services.

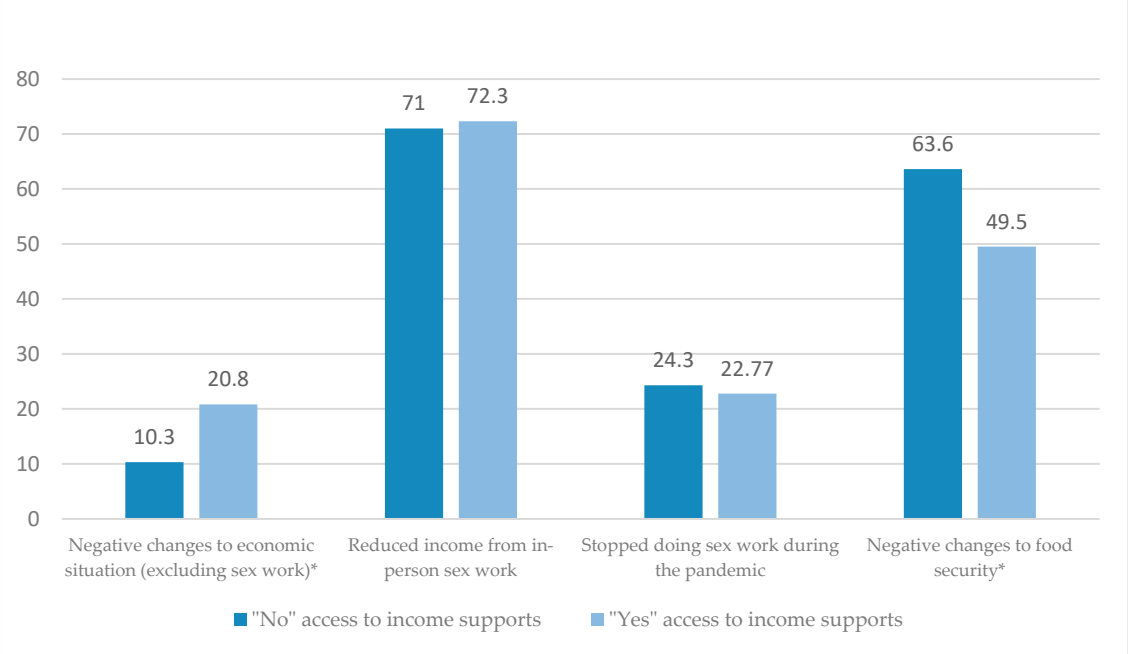

Figure 1. Self-reported impacts of COVID-19 on occupational health and safety and personal wellbeing of sex workers in Metro Vancouver, Canada, stratified by access to COVID-19 Emergency Income Supports (April 2020–April 2021). All data refer to % of participants. * *p*-value < 0.1.

3.2. Correlates of Accessing COVID Emergency Income Supports

In bivariate analysis, sex workers who used non-injection drugs (Odds Ratio (OR): 3.00, 95% Confidence Interval (CI): 1.57–5.74), were unstably housed (OR: 1.96, 95% CI: 0.75–5.15), and had ever been incarcerated (OR: 2.38, 95% CI: 1.13–5.03) had higher odds of accessing COVID emergency income supports, whereas Indigenous sex workers (OR: 0.61, 95% CI 0.35–1.05) had lower odds (Table 2). In adjusted multivariable analysis, lifetime incarceration was marginally associated with increased odds of accessing COVID income supports (Adjusted Odds Ratio (aOR): 1.96, 95%CI: 0.86–4.47, p = 0.11), non-injection drug use was associated with higher odds of accessing income supports (aOR: 2.58, 95% CI: 1.31–5.07), whereas Indigenous women faced 45% reduced odds of accessing COVID income supports (aOR 0.55, 95% CI 0.30–1.01) (Table 2).

Table 2. Unadjusted and adjusted logistic regression analysis of correlates of accessing COVID emergency income supports among women sex workers in Metro Vancouver, Canada, AESHA, April 2020–April 2021 [n = 208].

Characteristic	Unadjusted		Adjusted	
	Odds Ratio (95% CI)	p-Value	Odds Ratio (95% CI)	p-Value
Month of COVID Interview (per month)	1.15 (1.05–1.25)	0.002	1.14 (1.04–1.25)	0.005
Structural level				
Sexual Minority *	1.11 (0.64–1.92)	0.711		
Trans women (vs. cis women) **	0.60 (0.25–1.44)	0.253		
Non-injection drug use †	3.00 (1.57–5.74)	0.001	2.58 (1.31–5.07)	0.006
Indigenous	0.61 (0.35–1.05)	0.075	0.55 (0.30–1.01)	0.052
Any unstable housing †	1.96 (0.75–5.15)	0.170	‡	
Lifetime incarceration	2.38 (1.13–5.03)	0.023	1.96 (0.86–4.47)	0.110
Community Level				
Accessed sex work outreach programs †	1.13 (0.65–1.96)	0.673		
Engaged/volunteered/worked with any community organizations †	0.73 (0.38–1.40)	0.339		
Work environment level				
Primary place servicing clients †				
Indoor space (formal and informal)	reference			
Outdoor or public space	1.06 (0.49–2.27)	0.935		
No sex work	1.06 (0.56–2.01)	0.839		

† In the last six months. * Gay, lesbian, bisexual, Two-Spirit, asexual, queer. ** Trans women inclusive of transgender women, transexual women and other transfeminine identities vs cisgender women. ‡ Included in the full multivariable model but not retained in the best fitting model.

4. Discussion

Community discourse has highlighted the pandemic's negative impact on sex workers' financial security. Our current study with sex workers in Vancouver, Canada during the first year of the COVID-19 pandemic found that a large majority experienced reduced income as well as negative changes to food security. Despite their income being impacted by COVID-19, we found that less than half reported accessing government income supports during the first year of the pandemic. Sex workers' access to income supports was found to be further shaped by intersecting macrostructural factors, including systemic racism. Sex workers who use non-injection drugs had higher odds of accessing government income supports, whereas Indigenous sex workers had lower odds of accessing such supports, suggesting the compounding impacts of ongoing colonization and the disproportionate burden of criminalization and marginalization faced by Indigenous women.

Sex workers in our study reported a fairly low prevalence of income supports (48.6%) compared to 57–67% of overall women workers in the service industry within Canada (Morissette et al. 2021). Such discrepancies highlight the unique occupational inequities faced by sex workers, and ways that criminalization and stigma prohibit their access to

structural supports afforded to other care, service, and low-income workers. Our study found, in line with community discourse and data sourced elsewhere in Canada (Lam 2020a; Benoit and Unsworth 2022), a large portion of sex workers reported being ineligible to apply or faced other barriers to applying to COVID emergency income supports. Like other informal, criminalized and stigmatized workers, many sex workers were unlikely to meet the rigid requirements for emergency income supports because they did not earn the minimum required income, or may not have filed previous year's taxes due to structural barriers such as stigma, criminalization, immigration status or other precarity (Benoit and Unsworth 2022). The current study also captured access to personal bank accounts among participants, finding that sex workers that did have a bank account were overrepresented among those able to access income supports. This barrier was also noted by community organizations at the beginning of the pandemic: many of the most marginalized may not have bank accounts for receiving income support payments, which came in the form of electronic deposits or cheques. (Amnesty International and Clamen 2020). Others may fear repercussions for "wrongly" accepting support payments, and the stress of having to pay back large sums of money could deter many financially precarious workers from ever applying.

Our results found less than half (46.2%) of women of colour sex workers reported having accessed COVID emergency income supports. While, due to a small sample size, the experiences of im/migrant and women of colour sex workers may be underrepresented in our multivariable findings, evidence from Vancouver and elsewhere in Canada has highlighted the ways in which im/migrant and women of colour sex workers experienced exacerbated barriers to employment and increased discrimination throughout the pandemic (Raguparan 2022). In the context of intersecting and compounding structural factors including sex work criminalization, occupational stigma and punitive immigration policy, im/migrant and women of colour sex workers in Canada faced immense barriers to government income support, such as fear of consequences of disclosing their legal name/occupation to government services, including privacy violations, criminal charges and detention or deportation (Lam 2020a). In a survey with im/migrant sex workers based in Toronto, 30% reported being ineligible for COVID emergency income supports (Lam 2020a). Community organizations such as SWAN Vancouver, who helped support their members via relief funds, have long cited the need to end punitive immigration policy to support im/migrant workers' access to economic supports during a global pandemic and beyond (Mackenzie and Clancey 2020; SWAN Vancouver 2021). There is a critical need for future and continued research on the health and social inequities faced by women of colour and im/migrant sex workers, and the specific implications of racism and anti-migrant ideologies, both within and beyond the current COVID-19 pandemic.

Our results showed that sex workers who use drugs had 2.5-fold higher odds of accessing COVID emergency income supports, and that sex workers with a history of incarceration had marginally higher odds of access. This may be attributed to community level factors, including the efforts of sex worker-specific and substance use harm reduction services, such as Providing Advocacy Counselling and Education (PACE) Society and Sex Workers United Against Violence (SWUAV) (SWUAV Board Members 2019), Western Aboriginal Harm Reduction Services (WAHRS) and Vancouver Area Network of Drug Users (VANDU). More than one-third of sex workers in this study also reported living in the Downtown East Side (DTES), a neighbourhood within the City of Vancouver characterized by both social and economic inequities as well as significant community organizing and low-threshold services. Though facing ongoing inequities, policing and gentrification, organizers within the DTES have been successful in scaling up low-barrier supports, including harm reduction and safe supply services during the ongoing overdose pandemic, as well as sex work-specific services. Community level factors, such as utilization of and engagement with such services have been previously shown to support sex workers' occupational health, safety, and wellbeing (Pearson et al. 2022). Throughout the COVID-19 pandemic as well, sex work organizations have been highly successful in pivoting their services in order to reach

diverse communities of sex workers, despite lockdowns and service interruptions (Benoit and Unsworth 2022; Lam 2020b; PACE Society 2020; St. Denis 2021; McBride et al. 2022). In some instances, sex work community organizations were able to support sex workers in applying for COVID emergency income supports by providing computer and internet access, or offering guidance on the application process. However, due to Canada's colonial legacy of racism, displacement, and violence, Indigenous people, including sex workers are also overrepresented within the DTES (Goldenberg et al. 2020a; City of Vancouver 2013), and have demonstrated tremendous leadership within the neighbourhood's community resources. Therefore, it is especially troubling that our current results show reduced odds of emergency income supports access among Indigenous sex workers, as many were likely to have utilized such community supports throughout the pandemic.

Our current study suggests that sex workers' access to income supports during the pandemic was shaped not only by sex work criminalization and stigma, but also colonialism and systemic racism. Our results found Indigenous sex workers faced 45% reduced odds of accessing COVID emergency income supports compared to their non-Indigenous counterparts, which in this study sample is predominately white sex workers. Previous research has highlighted the disproportionate social and economic impacts of the COVID-19 pandemic on Indigenous people, including a greater impact on their ability to meet essential needs (Arriagada et al. 2020), increased fear of violence due to financial precarity (Native Women's Association of Canada 2020), and experiences of anti-Indigenous racism and discrimination within healthcare settings (Government of British Columbia 2020). In the context of colonialism, forced poverty and exclusion from formal labour protections, government data suggest that 36–42% of Indigenous workers received COVID emergency income supports in 2020, which is slightly higher than the 33.9% of all non-Indigenous workers who received such payments (Morissette et al. 2021). Low-income workers across Canada were disproportionately impacted by the pandemic, and the higher proportions receiving emergency income supports payments among Indigenous workers reflect, in part, their overrepresentation in underpaid jobs. The underrepresentation of Indigenous sex workers among those who accessed emergency income supports in our current study may be explained by the disproportionate and compounding criminalization, stigma, trauma, and marginalization faced by Indigenous women in the context of sex work (Bingham et al. 2014; Thumath et al. 2021; Duff et al. 2014; Krüsi et al. 2016), as well as widespread discrimination faced by Indigenous peoples within colonial systems of care (Government of British Columbia 2020). These findings suggest that COVID emergency supports offered by colonial governments were insufficient to reach Indigenous women sex workers, and suggest the need for more culturally safe alternatives, or supports to assist Indigenous women in navigating colonial structures, in addition to long-term efforts to dismantle colonial systems. As relatively little literature has focused on Indigenous sex workers' experiences during COVID-19, there is need for further examination of the impacts of criminalization and colonialism on Indigenous sex workers' access to structural income supports.

4.1. Policy Implications

COVID-19 has further revealed the health and social inequities faced by sex workers are not inherent to their work, but are attributable to structural factors including criminalization, occupational stigma (Benoit and Unsworth 2022; Krüsi et al. 2016), and the lack of income support that all workers need during a pandemic to protect their own health and that of the public (Lam 2020b; Platt et al. 2020). Local and international sex workers and organizations have cited an urgent need for full sex work decriminalization, scaling up of sex work organizations and grassroots supports as well as a basic income to enable sex workers to stay safe at work during this crisis and beyond (Lam 2020a; NSWP and UNAIDS 2020; Taylor et al. 2020; Amnesty International 2020; Jozaghi and Bird 2020).

Under the wake of the pandemic, the loom of lockdowns and a known history of exclusion, sex workers were quick to mobilize, organizing low-barrier mutual aid initiatives to support the most marginalized sex workers. Groups like PACE Society and Maggie's

Toronto were able to raise hundreds of thousands of dollars to distribute to sex workers with no strings attached (PACE Society 2020; Maggie's Toronto 2020). SWAN Vancouver was also able to distribute critical emergency funds to local Asian im/migrant sex workers (SWAN Vancouver 2021). However successful these initiatives, the demand was too great as most sex workers had no other accessible income supports. Such experiences highlight community calls for governments to provide not only basic income to individuals, but also increased funding for such community organizations, who are often best suited to distribute supports including economic assistance in ways that are accessible and safe for their members (Pearson et al. 2022; McBride et al. 2022; Amnesty International and Clamen 2020; Kerrigan et al. 2015; Spade 2020). This is particularly true for Indigenous, racialized, and criminalized women, who face intersecting and compounding barriers, and for whom engaging directly with colonial, governmental institutions may not be accessible nor safe. In line with the In Plain Sight Report, and calls for justice from the Final Report of the National Inquiry into the MMIWG2S, the current study supports the need for governments to implement a system-wide approach to addressing anti-Indigenous racism within care systems, uphold the social and economic rights of Indigenous people, and support programs and services for Indigenous sex workers (Government of British Columbia 2020; National Inquiry into Missing and Murdered Indigenous Women and Girls 2019).

Under structural conditions that treat sex work as exploitation, rather than labour, our findings and those of others (Benoit and Unsworth 2022; Lam 2020a) show sex workers have been excluded from emergency benefits meant to aid all workers impacted by the pandemic. Precarious workers have had no choice but to continue to work during this crisis, risking their health and safety and highlighting the inherent contradictions of laws that effectively criminalize sex work to "protect vulnerable communities." Ultimately, the full decriminalization of sex work for all workers is first needed to allow equitable access to economic and other structural supports to advance sex workers' health, safety and dignity. As policymakers, researchers and communities around the globe continue to grapple with, and learn from, the many inequities brought to bear during the COVID-19-pandemic, it is important that research from diverse parts of the world continue to center the specific impacts faced by sex workers, in an effort to advance policy change and equity for all.

4.2. Strengths and Limitations

Our study presents some of the first empirical data on women sex workers' access to COVID emergency income supports and broader economic impacts of the pandemic, as well as the experiences of Indigenous sex workers specifically, leveraging cross-sectional data collected by the longest-standing cohort study of sex workers in North America (AESHA) during the first year of the COVID-19 pandemic. As well, this research demonstrates the value of utilizing not only a structural determinants framework, but also a critical, intersectional feminist approach to epidemiological methods as a means of informing systems-level change. The original AESHA study was not designed to assess impacts of COVID-19. Given the challenges of connecting with sex workers during COVID-19 lockdowns, closures, and service disruptions, we were able to reach a relatively small sample (n = 208), which limits statistical power. However, our findings provide unique and important empirical patterns which are consistent with the observations of local community and highlight important associations that can inform future interventions. Self-reported data may be subject to recall, social desirability, or misclassification biases. Our frontline staff includes experiential (current/former sex workers) and community-based interviewers with deep experience in building rapport with participants across interview and outreach activities, which is likely to mitigate social desirability bias. While we drew on cross-sectional data from the main semi-annual AESHA questionnaire and a COVID-19 supplementary questionnaire administered with the same participants, there was some variation in reference times for variables between the questionnaires (i.e., in the last six months vs. since COVID-19 began in BC in March 2020); a small number of questionnaires were completed up to three months apart, which may result in some temporal variation.

Non-Indigenous women of colour as well as im/migrant sex workers and those working in formal indoor venues (i.e., massage parlours) are under-represented in our data, due to limitations in conducting in-person research in these work environments under COVID-19 lockdowns and public health measures. Further research is needed to fully elucidate the. unique experiences of diverse groups of sex workers, including Black, Asian and Latinx sex workers. Given concerning community reports that Asian, im/migrant sex workers faced intensified racism, anti-Asian xenophobia and precarity during the pandemic (Lam 2020a; SWAN Vancouver 2021), further research on their labour conditions amid COVID-19 is urgently needed. As well, as the AESHA cohort has historically centered the experiences of women/femme sex workers, this work cannot be generalizable to the experiences of men, transmasculine or non-binary sex workers. Additional research that captures the experiences of sex workers of all genders, especially during the COVID-19 pandemic, is very much needed. Lastly, our study found a positive association between non-injection drug use and access to emergency income-supports, suggesting a linkage between substance use harm reduction services and increased access to supports. As an in-depth exploration on sex workers' utilization of harm reduction and safe supply services during a dual pandemic was beyond the scope of this analysis, we suggest further research in this area.

5. Conclusions

In summary, the present study found access to COVID-19 emergency income supports among sex workers to be low overall, particularly in comparison with other service workers, and is among the first quantitative studies globally to report on this topic among this population of precarious workers. Barriers to COVID emergency income supports were exacerbated for Indigenous sex workers, demonstrating the impacts of compounding structural factors, including colonization and disproportionate criminalization and marginalization of Indigenous sex workers. This research demonstrates the need for full decriminalization of sex work as a means to reduce structural barriers, in addition to governmental and community-based economic supports for sex workers that are low-barrier, accessible, and delivered in a culturally safe way to ensure sex workers and their communities have access to the social, material, and emotional resources which allow them to thrive.

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Notes

[1] Our recruitment criteria are inclusive of diverse and fluid identities while capturing the ways that patriarchal gender norms shape participants' experiences in sex work. Eligibility is inclusive of cis women, transgender women, transexual women and other self-reported transfeminine identities at enrolment. In acknowledging that gender identity is fluid, we recognize that some of our participants' gender presentation differs throughout various times and aspects of their lives. For example, a participant may present as a woman/femme while interacting with sex work clients but identify as non-binary outside of work environments.

[2] The Downtown East Side (DTES), a neighbourhood within the City of Vancouver characterized by both social and economic inequities as well as significant community organizing and low-threshold services.

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