

Power users: Technology, trust, and the social networks of Canadian sex workers

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See also [Turnover and industry longevity of Canadian sex workers](#) based on this sample

Abstract

The transition from physical to online advertising by sex workers in Canada has been well documented. However, few studies use rigorous sampling methods. This study considers how a technically sophisticated group of advertisers from a large Canadian sex work classifieds site used multiple online resources to promote or provide services during the COVID-19 pandemic. Advertisers qualified for the study if they used a URL as part of their contact information and were actively advertising between August 23 and September 22, 2022. A random sample of 1000 qualifying advertisers were selected, of which 783 had accessible contact URLs. Themes were identified in downloaded website texts using grounded theory analysis. Ad metadata was used to identify demographic and behavioral distinctions between the sample and other advertisers. Almost all sampled advertisers (99%) provided in person services, and most (70%) provided online services. The sample advertised more frequently, were more affluent and were more likely to be Anglophone, White, trans-female, or provide BDSM services. Themes of *security*, *health*, *identity*, and *social networks* were identified. Advertisers emphasized physical, emotional, and financial security. Most workers did not work in isolation, and many participated in extensive social networks.

Keywords: sex work, identity, health and safety, research methods, social media

Introduction

This study explores how sex workers use online resources in the context of marketing and providing their services. It considers how a select group of sex work advertisers, who might be considered “power users”, integrate multiple modes of promotion and service delivery.

Information and communication technologies (ICTs) have become an essential tool for sex workers in Canada (Agresti, 2009; Argento et al., 2018; Bernier et al., 2021, 2021; Castle & Lee, 2008; Jiao et al., 2021; Kennedy, 2022; Kille et al., 2017; Machat et al., 2022; Minichiello et al., 2013). Furthermore, online classified advertising is heavily used by Canadian sex workers and is an important resource for researchers trying to understand sex work demographics (Kennedy, 2022), migration patterns (Boecking et al., 2018), or health and safety messaging (Kille et al., 2017). However, even for a relatively small country population such as Canada’s, getting a representative dataset from online advertising can result in collections containing millions of documents. It is a significant challenge for researchers using these materials to find practical strategies for working with large online datasets.

Online classified advertising can provide rich demographic metadata but, importantly, it localizes advertiser behavior in time. In an industry where it is likely that high turnover is the norm (G. Abel et al., 2007; Kennedy, 2022, 2024) this is an important consideration to avoid arriving at invalid conclusions (Cusick et al., 2009). It can be a challenge to find representative samples of participants, as many workers do not want to be identified due to persistent stigma. There is an understandable belief among many researchers, (Weitzer, 2005) for example, that it is impossible to use more rigorous sampling techniques and randomization.

This study addresses these issues by using sex work advertisers identified from classified ads as a sampling frame. Advertisers selected for further study were characterized by a

combination of metadata from classified ads and additional external web materials associated with the advertiser. Grounded theory analysis (Corbin & Strauss, 1990) of web materials created by advertisers is an important component of this study. The external web resources created by advertisers provide information that is difficult or impossible to gather from online classified ads alone. For example, beyond in-person services, what other types of services do contact sex workers provide? How, and how much, are workers paid? How socially connected are they? As these source materials often represent a stable online identity, it is possible to get a sense of how sex workers present themselves (or are presented) and what they expect from clients.

As the aim of the study is to better understand how sex workers use multiple ICTs, advertisers were included if they represented in-person or online sex workers who used external websites in their contact information. These websites, described in more detail below, could be profile pages, social media, personal websites, content delivery sites, or links pages where multiple sites can be accessed when an advertiser uses a combination of external resources.

In contrast to street based sex work, where interactions are typically brief (Krüsi et al., 2014), online advertisers often engage in extended interactions with prospective clients. This can result in improved occupational health and safety for many workers (Kruesi et al., 2012; Machat et al., 2022). However, managing privacy online can be risky (Jiao et al., 2021). Furthermore, differentiating oneself from the crowd can be a challenge and workers can go to great lengths to develop distinct sex work personae (R. Bowen & Bungay, 2016; R. R. Bowen, 2013, 2015; Nelson et al., 2020).

The timing of the data collection was during the COVID-19 pandemic, when many sex workers reported significant reduction in income (Lam, 2020) and reduced access to services (McBride et al., 2023). While the likely number of workers during this period was comparable to

that of 2015 (Kennedy, 2023), the year following the introduction in Canada of the (Protection of Communities and Exploited Persons Act, 2014), how sex workers provided services may have changed to adapt to the ongoing pandemic.

The main research objectives of this study are to provide a larger scale characterization of a distinct group of sex work advertisers who promoted or provided a variety of services on multiple platforms. How important are online versus in-person interactions with clients? How does the concept of community manifest itself with these advertisers? Grounded theory techniques were used to explore these linked web materials to identify common themes expressed by these advertisers in their communications with clients. Advertising metadata provided further context, identifying how these advertisers differed from other users of classified advertising.

This work follows up on earlier work on sex worker communications (Jiao et al., 2021; Kille et al., 2017; Moorman & Harrison, 2016) but the sampled advertisers represent a much larger and varied group of workers. Online advertising spaces are currently the most relevant place for researchers in industrialized democracies to start, given their pervasive use by sex workers. The sampling methodology employed shows that it is feasible to use rigorous sampling strategies to identify relevant sub-populations of sex workers for qualitative study.

Materials and Methods

Sample selection

This study is a qualitative examination of web materials generated by Canadian sex work advertisers to better understand their attitudes, social connections and safety strategies.

Advertisers were identified by chat names used for an internal chat function from publicly visible ads gathered from a prominent Canadian sex work classifieds site employing methods described in (Kennedy, 2022). Ads were downloaded between September 15, 2021 and September 22, 2022. The site, named Site 3 in the Kennedy (2022) study, is a classifieds site that is currently used by a very large number of advertisers (Kennedy, 2023). Site 3 was one of the sites identified by industry informants as a significant advertising venue for sex workers. The informants were part of the *Sex, Power, Agency, Consent, Environment and Safety* (SPACES) project (SPACES Team, 2016). SPACES was initiated in 2012 at the University of British Columbia to explore health and safety issues experienced by off-street sex workers.

Not all advertisers identified from the downloaded ads represented contact or online sex workers who had contact metadata. To eliminate irrelevant advertisers, the three most commonly posted ads for each advertiser were visually inspected and advertisers were included if they represented a sex worker with contact information. These advertisers represented the initial sample population for the study.

Advertisers qualified for the study if they had been active between August 23, 2022 and September 22, 2022 and had used a URL as part of their contact details. To identify advertisers who used URLs in their contacts, a common contact metadata field was used. An initial random sample of 1000 advertisers was identified.

Web material collection and coding

Ad URLs for the sampled advertisers were identified and manual downloads of ads were attempted between the 24th and 30th of September 2022 using a clean installation of the Firefox

web browser (Mozilla, 2022). Manual downloads were necessary to expose the contact metadata in the ads.

On Site 3, advertisers can activate and deactivate ads. For the minority of advertisers that did not have active ads, profile pages on the classified site were often available and were downloaded when no recent ads were available. These profile pages could also be used as contact URLs. Once ads had been downloaded and contact information exposed, URLs were extracted for further study. Data from the associated websites was manually downloaded and web page screenshots were taken between the 1st and 8th of October 2022.

Text captures of all downloaded web pages were made for further coding and analysis. Text extraction for HTML pages used a custom regular expression filter (Supplemental materials S1 File) and Tesseract (*Tesseract*, 2019) was used for web page snapshots. All text captures for a given advertiser were combined into a single document. These combined documents were initially coded using QualCoder (Curtain, 2023). All coded texts were then integrated with the advertising database. A LibreOffice spreadsheet (The Document Foundation, 2020) was also created using the most relevant coded texts for more detailed grounded theory analysis. This spreadsheet is available in Supplemental materials S2 File. These initial codes were used to identify common themes, which were then grouped into broad subject areas for inclusion. Downloaded pages were also examined for evidence of collective advertising, where the principal advertiser was an escort agency, collective, or massage parlor.

Statistical measures

Counts of advertisers associated with identified themes were tabulated. What advertisers charged per hour from both advertising data and external websites was calculated and compared.

As payment options for sex workers have expanded in recent years, counts of workers mentioning different payment methods were tabulated. In addition, descriptive statistics regarding how advertisers were using social media were collected (posts, follower and following counts). LibreOffice Calc (The Document Foundation, 2020) was used to calculate descriptive statistics (see Supplemental materials S3 File).

Advertisers were classified based on whether their associated contact URLs represented an individual or a collective. In addition, the number of workers represented by a given advertiser was estimated using combined counts of names from both the collected web materials from contact URLs and classified ads. The number of names found in classified ads and names found in external web materials were compared to see if advertisers who appeared to be individuals were either using multiple names or represented collectives.

Statistics from online classified ads were generated for demographic and behavioral variables for all included advertisers and segmented for sampled advertisers and advertisers who did not use URLs as contacts. Counts of ads, days advertising, and average ad views were generated. Counts of advertisers were segmented based on the demographic variables of self-identified gender (based on ad URL), self-identified ethnicity (based on ad metadata), locale (*Incall*, *Outcall* or *Online* based on ad metadata) and geographic location (based on ad URL). The R *prop.test* function and R BSDA package *tsum.test* function were used to compare proportions and means respectively between segments (Arnholt & Evans, 2021; R Core Team, 2021). R version 4.2.2 was used to perform all tests using a 95% confidence level.

Ethics statement

All source data used in this study consisted of publicly available data at the time it was

collected and was collected in accordance with the policies of the sites in effect at the time. The methods used are conformant with the ethical standards of the Canadian Sociology Association (section 4.10 II) and the American Sociology Association (section 10.5 c) (American Sociological Association, 2018; CSA-SCS Policy, Ethics, and Professional Concerns Subcommittee, 2018). As the replicability of the main results of this paper is important, a data set is provided as part of the supporting information along with the code used to process it. However, to protect the safety and privacy of advertisers and third parties, all identifying information has been removed, including the names of the source websites.

Results

Sample selection

Between September 15, 2021 and September 22, 2022, 1217296 classified ads were downloaded from one classifieds site popular with sex workers in Canada. The downloaded web pages contained 54558 chat names. From this original group, 39562 chat names were included as advertisers. The 14996 excluded chat names comprised 11962 who were clients seeking services, 1718 with no contact information, 845 who represented “hookup” sites, 457 representing other services (drivers, condo rentals etc.), and 14 who offered non-sexual therapeutic services. A large sample of classified ads (N=891695) associated with the included advertisers was used to identify advertisers who were using URLs as part of their contact information. There were 2452 active qualifying advertisers from which 1000 advertisers were randomly selected. Of the selected advertisers, 783 had accessible contact URLs. These advertisers comprised the sample used for the study.

Site 3 allowed advertisers to use multiple chat names. In practice, this did not appear to be common: based on similar web links, 12 advertisers appeared to be using 32 chatnames. Except as described below in the Social Networks section, advertisers were reviewed “as is”.

Web material collection and coding

Website data from contact URLs was downloaded between October 1 and 9, 2022. When a contact URL was for a personal website, all pages from the site were downloaded to provide context where feasible. Some advertisers had produced personal websites with dozens of individual pages, many of which were not directly related to sex work. For those advertiser sites, only those pages which pertained to sex work were downloaded. When a contact URL was a links page, a service that allowed users to create simple pages with links to the user’s social media, personal website, gift page, or content creator site, all links were downloaded. In total, 2334 HTML documents from 392 domains were downloaded for analysis. Advertisers provided links to different types of websites in their contact information including profile pages (48 advertisers), personal web pages (322 advertisers), social media sites (189 advertisers) and content creator sites (167 advertisers). There were 119 advertisers who had no active ads. For these advertisers, their Site 3 profile page was used instead of a contact URL. Most advertisers were associated with one domain (mean 1.0, SD 0.4, median 1, IQR 1-1, max 6).

Grounded theory analysis of the website capture data revealed four overarching themes: *security*, *identity*, *health* and *social networks*. The *security* theme was the most common, associated with 336 advertisers (43%), followed by *identity* associated with 325 advertisers (42%), *social networks* associated with 313 advertisers (40%), and *health* associated with 276 advertisers (35%). These themes are explored in more detail in the following sections.

Security

The concept of security, defined as the mitigation of risk, is a large topic. In this context, it encompasses all risks apart from those pertaining to health or substance use, considered separately in the Health section. The sampled advertisers used multiple strategies to implement security that broadly could be divided between physical, emotional and financial security. In many cases, such as the practice of screening prospective clients, multiple types of security were addressed by one strategy.

Work location

Based on advertising metadata, the majority of the sampled advertisers combined online and in person services (70%, N=546). This is significantly more than the proportion for all included advertisers (42%, N=16720, *prop.test* CI [0.24, 0.31], $p < 0.001$). Advertisers who advertised in person services exclusively were less common (30%, N=234) and only 3 advertisers were exclusively online.

Despite the fact that the majority of the sample advertised some form of online sex work, only a minority of advertisers (N=167, 21%) provided links to content creator sites: sites that allow advertisers to sell videos and still pictures on a per item or subscription basis. It was more common to provide online services informally via text, video, or voice calls. A few advertisers sold physical goods such as panties (N=21), lubricant (N=4), bodily fluids (N=2) or other goods and services.

While online work is far less risky than meeting clients in person, it is likely to be far less profitable. Based on advertised subscription rates for online content (mean CAD \$21.51 per month, SD CAD \$14.32, N=214 based on an exchange rate of CAD \$1.37 for USD \$1.00) and

online sex work (mean CAD \$152.37 per hour, SD CAD \$97.34, N=51) workers appear to earn substantially more doing in person sex work as the mean hourly rate based on advertising data was CAD \$276 per hour (SD CAD \$87, N=569).

Sampled advertisers were also significantly more likely to advertise outcall work, where the worker visits the client, with 83% (N=652) providing this service compared to 74% (N=29287) for all advertisers (*prop.test* CI [0.07, 0.12], $p < 0.001$). A small number (N=33) of the 652 providing outcall service mentioned some form of safety measure. The most common was restricting outcalls to hotels (N=14) and, less commonly, homes (N=8). Some advertisers explicitly prohibited outcalls to cars (N=7) and some would only provide outcalls to regular clients (N=6).

Consent, respect and privacy

Consent was discussed by 17 advertisers. It was particularly important for advertisers providing services that might involve pain or psychological distress. As one advertiser described it: *“Safety and consent are always a top priority and non-negotiable. ... I always practice R.A.C.K – risk-aware consensual kink. Every session is discussed in advance, including any potential risks, and mutually consented to.”* [advertiser 501]

Respect was discussed by 145 advertisers. Most advertisers (N=101) prohibited negotiating rates followed by prohibitions on rude, verbally aggressive behavior, or wasting the advertiser’s time (N=72), and, finally, many prohibited explicit talk (N=20). Overall, these practices help workers avoid bad actors who could potentially turn violent. As one advertiser explained: *“I take rudeness and aggression as a red flag and will not book, or will end a session immediately if either is demonstrated.”* [advertiser 287]

Privacy, explicitly mentioned by 92 sampled advertisers, was a potential source of conflict when clients felt the need to hide their identity. For example, there appeared to be a debate over the use of text apps, which hide the phone number of the sender. A client posting to a forum page linked by one advertiser explains it this way: *“the men that do this are in committed [sic] relationships. And do not want to use their real numbers as it could lead to issues.”* [advertiser 155] However, the consensus among advertisers discussing this topic is that the benefits of a potentially broader clientele are outweighed by the risks of poor interactions: *“I’ve made a decision to avoid no-shows and game players to only allow gentleman [sic] who I’ve seen before to text me ... I know the voice interaction would make both parties feel much more comfortable”*. [advertiser 6]

Advertisers were divided regarding how they wished to be contacted. The convenience of text based communications was weighed against safer voice or video calls. Most of these advertisers, 112 out of a total of 157 expressing a preference, preferred text as the initial form of contact and 39 preferred email or web form contact, with only 47 preferring voice calls.

Screening

Some advertisers employed more formal screening processes (N=74). These advertisers tended to advertise higher hourly rates than other sampled advertisers (mean CAD \$326.39, SD CAD \$87.78, N=28, mean CAD \$274.12, SD CAD \$86.45, N=752, *tsum.test* $t = 3.0955$, $df = 28.984$, $p\text{-value} = 0.004$). These advertisers were more likely to use social media than advertisers who did not (screening 41% = 30/74 vs no screening 22% = 158/709). However, they were less likely to be content creators (screening 11% = 8/74 vs no screening 34% = 340/709).

The most popular form of screening required prospective clients to send a copy of some form of government issued identification (N=31 advertisers). References from other workers

were required by 30 advertisers followed by LinkedIn profiles required by 17 advertisers, forum or social media handles required by 9 advertisers, voice calls required by 3 advertisers, photos required by 2 advertisers.

Even when screening did not involve providing identification, prospective clients were often required to divulge personal information as part of the booking process. Examples included cell phone number, full legal name, age, occupation, or ethnic background. One or more of these types of information was requested by 62 sampled advertisers. Age was by far the most commonly requested, with 44 advertisers requiring this information. For these advertisers, the median minimum age was 21 years (IQR 19-29, mean 23.4, SD 6.7, N=43) and one advertiser restricted clients to 50 and older. Most advertisers did not mention a maximum age but two set this limit at 60.

Deposits

Deposits, a relatively new phenomenon, were mentioned by 154 sampled advertisers. These could range from a small nominal fee to 100% of the agreed upon compensation for an appointment. Sampled advertisers who required deposits advertised significantly higher hourly rates than sampled advertisers who did not (mean CAD \$320.41, SD CAD \$85.31, N=153 versus mean CAD \$262.41, SD CAD \$82.93, N = 627, *tsum.test* $t = 7.5811$, $df = 227.24$, $p\text{-value} < 0.001$).

The practice of requiring deposits has only become possible as online forms of payment have become available. In addition to cash payments, there were 9 other compensation methods mentioned by a total of 167 sampled advertisers. The most common, shared by both online and in-person workers, were wish lists used by 81 advertisers, where clients could buy the worker goods online, followed by email funds transfer (e-transfer) (N=53), gift cards (N=24), online

payment processors (N=21), cryptocurrencies (N=21), credit cards (N=16), on site ATMs (N=11), and debit cards (N=9). In no case did advertisers accept wish list items for deposits and in some cases some payment types such as e-transfer (N=8) and online payment processors (N=3) were forbidden either because the advertiser was banned by the financial service or felt that sex work related financial activity could identify them.

Health

COVID-19

Data collection was conducted in late 2022 while the COVID-19 pandemic was still considered a health emergency in Canada. COVID-19 protection measures were mentioned by 68 sampled advertisers (51 individuals and 17 collectives). These advertisers discussed vaccination (N=36), disinfection procedures (N=10), and restricting contact with clients who were currently or recently ill (N=20) or had recently traveled (N=5). One advertiser required proof of vaccination

Sexual practices

Many of the sampled advertisers discussed hygiene (N=112) or sexual practices in the context of health (N=131). The majority of these advertisers discussed safe sexual practices (N=106). Condom use (N=71) was the most common safe sex practice discussed, followed by restrictions on fluid exchange (N=70), and STI testing (N=15).

A minority of advertisers discussed unsafe practices (N=51). The most common risky practices described were uncovered oral sex on the client (N=42), anal sex with or without

condoms (N=12), rimming (N=12) and oral sex on the worker (N=11). Some advertisers (N=27) discussed both safe and unsafe sexual practices.

Sobriety and substance use

The topic of substance use and sobriety was discussed by 152 of the sampled advertisers . Many advertisers (N=51) described their own sobriety or expected sobriety from clients. The most commonly mentioned substance was alcohol (N=62) discussed mostly in the context of gifts, social encounters (often provided as an additional service) or descriptions of personal tastes. Other, less frequently discussed substances were tobacco (N=38) where the majority were non-smokers (N=26), cannabis (N=32) and other drugs (N=29).

Identity

Biographical information

“The modern Matryoshka doll...because I too am many women in one.” [advertiser 496]

How do advertisers describe themselves? Many of the sampled advertisers had a personal web page (41%, N=322) some of which were quite detailed. While most of these sites could be characterized as marketing materials, 132 sampled advertisers included information on their opinions, attitudes and interests including blog posts (N=41), links to podcasts or media interviews (N=6), and political views (N=10). Four advertisers discussed stigma: one noted that they could no longer pay for advertising with a credit card, one discussed the risks to clients in Canada, one discussed getting blocked by social media sites, and one discussed planned government surveillance stating:

“I had a meeting this past week with the Canadian Civil Liberties Association to discuss the digital surveillance technology (like facial recognition) that the Canadian government wants to force onto sex industry websites which will affect both sex workers and clients!” [advertiser 279]

Of the 58 advertisers who discussed attitudes about working, the majority (N=36) expressed positive attitudes. For example, one described it this way: *“I absolutely adore what I do. I love the magic that happens when meeting someone for the first time”* [advertiser 76]. Other advertisers described the work in terms of freedom (N=7), choice (N=3), pride (N=1) and authenticity (N=13): *“It's important to me that our time together never feels transactional.”* [advertiser 191]

Advertisers described sex work in the greater context of their lives. Eleven advertisers described sex work as being their main occupation. However, a larger number described other activities. The most common non sex work activity was being an artist or musician (N=16) followed by having an outside job (N=15) or having external responsibilities (N=12). Education or intelligence was mentioned in the self-descriptions of 61 advertisers, with 58 advertisers describing themselves as either having completed a degree or being in the process of completing one.

Gender and sexuality

The sampled advertisers differed on some demographic measures from advertisers who did not use contact URLs. Table 1 shows proportions of advertisers by gender. Sampled advertisers exclusively advertising as cis-males were significantly less likely to use contact URLs. In contrast, trans-female identified advertisers were significantly more likely to use contact URLs.

Table 1: Comparing gender(s) associated with sampled advertisers and advertisers without contact URLs. Genders are identified by: *f* cis-female, *m* cis-male and *t* trans-female.

Trans-female and cis-male were significantly different between the two groups. P-values and CI from the R *prop.test* function.

genders	sample (N=783)	no contact URL (N=34683)	p	CI
<i>unknown</i>	12 (2%)	413 (1%)	n.s.	
<i>f</i>	655 (83%)	29614 (85%)	n.s.	
<i>f,m</i>	17 (2%)	861 (3%)	n.s.	
<i>f,m,t</i>	10 (1%)	71 (0%)	p < 0.001	[0.02, 0.00]
<i>f,t</i>	20 (3%)	255 (1%)	p < 0.001	[0.02, 0.00]
<i>m</i>	16 (2%)	2685 (8%)	p < 0.001	[-0.05, -0.07]
<i>m,t</i>	6 (1%)	113 (0%)	n.s.	
<i>t</i>	50 (6%)	671 (2%)	p < 0.001	[0.06, 0.03]

Most sampled advertisers did not explicitly discuss sexual orientation or identity (N=605). For the sampled advertisers who discussed sexual orientation (N=178), most indicated some form of queer identification (N=140). Workers who explicitly stated that they were straight (N=16) or would not work with couples (N=7) were relatively rare.

The number of fetish providers in the sampled advertisers was significantly higher than in the population of advertisers who did not use contact URLs (16%, N=123 versus 4%, N=1292, *prop.test* CI [0.09, 0.15], p < 0.001).

Ethnicity and geographic region

Table 2 shows the proportional differences of advertisers based on self-identified ethnicity from advertising metadata. Sampled advertisers identifying as *White* or using *Multiple* ethnicities were significantly more likely to use external URLs. Sampled advertisers using more than one ethnicity (*Multiple*) were a combination of 74% *White*, 62% *Mixed*, 36% *Asian*, 36% *Latino/Hispanic*, 25% *Black*, 13% *Middle Eastern*, 12% *Indo Canadian*, and 4% *Native*. Some advertisers were less likely to use external URLs as contacts: *Black* identified advertisers and advertisers with no ethnicity data (*Unknown*) were somewhat less prevalent in the sample.

Table 2: Comparing self-identified ethnicity of sampled advertisers with advertisers not using URLs. *Multiple* refers to advertisers associated with multiple ethnic identifiers whereas *Mixed* is a single self-identification used by advertisers of mixed heritage. P-value and CI from the R *prop.test* function.

ethnicity	sample (N=783)	no contact URL (N=34683)	p	CI
<i>Asian</i>	50 (6%)	2193 (6%)	n.s.	
<i>Latino/Hispanic</i>	29 (4%)	1652 (5%)	n.s.	
<i>Mixed</i>	61 (8%)	2810 (8%)	n.s.	
<i>Multiple</i>	200 (26%)	5278 (15%)	p < 0.001	[0.08, 0.14]
<i>Native</i>	2 (0%)	194 (1%)	n.s.	
<i>Black</i>	40 (5%)	2412 (7%)	p < 0.05	[-0.03, -0.0]
<i>Unknown</i>	1 (0%)	6973 (20%)	p < 0.001	[-0.21, -0.19]
<i>Caucasian/White</i>	403 (51%)	13171 (38%)	p < 0.001	[0.08, 0.14]

Significantly more of the sampled advertisers were associated with multiple provinces (45%, N=350 versus 17%, N=6030, *prop.test* CI [0.21, 0.18], $p < 0.001$) and, to a lesser degree, significantly more advertisers were from British Columbia (13%, N=100 versus 10%, N=3504, *prop.test* CI [0.05, 0.03], $p < 0.001$). In contrast, advertisers from Quebec were less prevalent in the sample (8%, N=62 versus 33%, N=11404, *prop.test* CI [0.22, 0.24], $p < 0.001$).

Advertising behavior

Based on advertising metadata, the sampled advertisers were different from other advertisers on four behavioral measures: days advertising, number of ads, hourly rates, and views per ad. They tended to advertise for significantly more days (mean 336 days, SD 98, N=783 versus mean 204 days, SD 124, N=34683, *tsum.test* $t = 36.845$, $df = 842.84$, $p < 0.001$) and significantly more frequently (mean 98 ads, SD 431, N=783 versus mean 18 ads, SD 346, N=34683, *tsum.test* $t = 4.8998$, $df = 786.42$, $p < 0.001$). They also advertised significantly higher hourly rates (mean CAD \$275.51, SD CAD \$87.24, N=569 versus CAD \$231.38, SD CAD \$79.71, N=17018, *tsum.test* $t = 11.902$, $df = 600.14$, $p < 0.001$). Mean views per ad were also significantly higher for sampled advertisers (mean 30606 views per ad, SD 53293, N=783 versus mean 6734 views per ad, SD 21061, N=34677, *tsum.test* $t = 12.536$, $df = 790.57$, $p < 0.001$).

Social networks

Working collectively

While the majority of advertisers represented individuals, most workers were associated with collectives. Based on counts of unique names from both classified ads and contact URL data, it was estimated that 3190 workers were represented by the sample of 783 advertisers after correcting for advertisers using multiple chat names. Of the workers identified, most were associated with collectives (282 advertisers associated with 2731 names). Overall, the classified ad data contained fewer names than the contact URL data (1976 versus 2320 names) but neither source was complete.

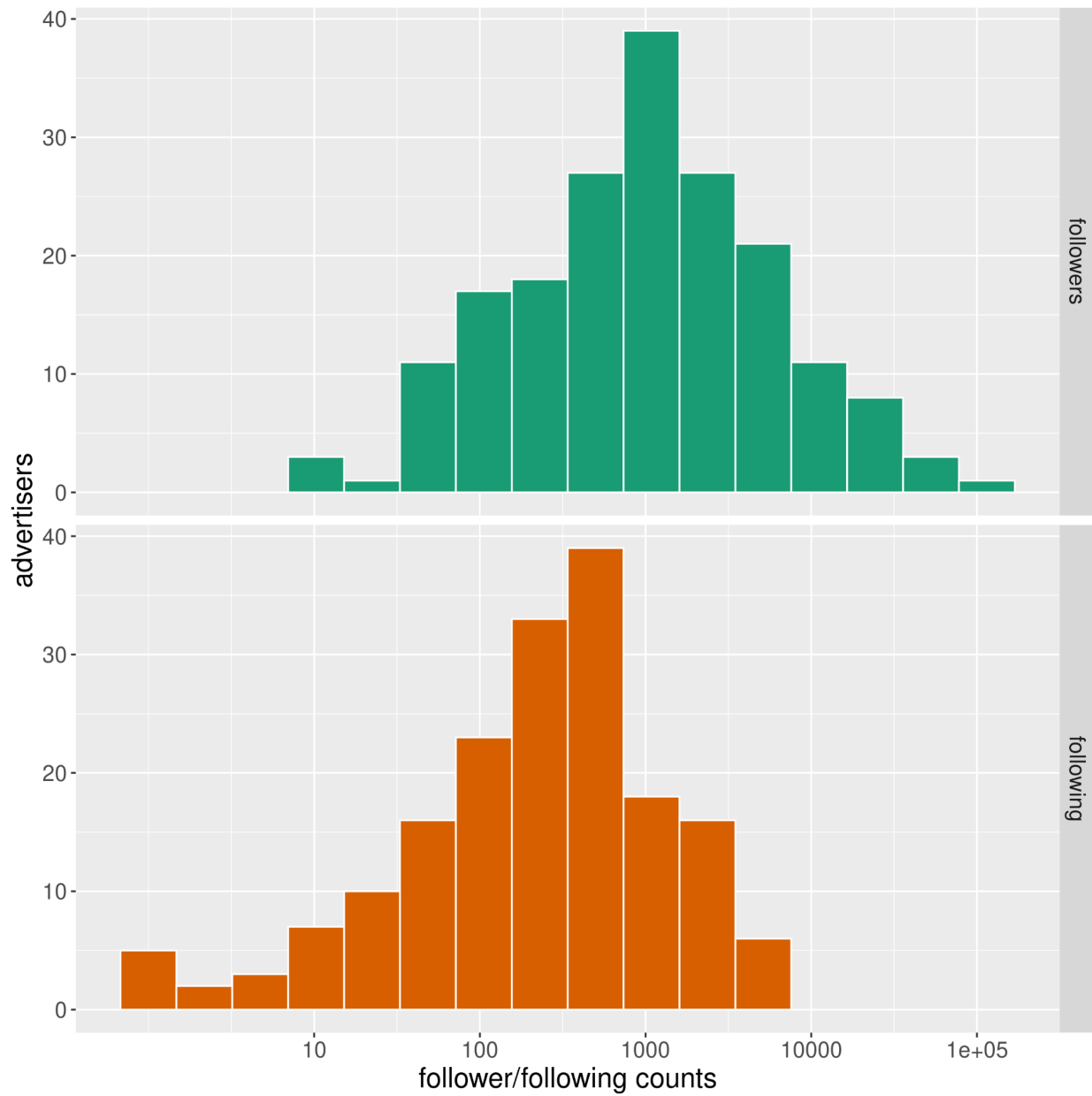
Based on contact URL data, many of the individual advertisers collaborated informally with other independent workers. Some worked as duo partners (N=77) and some shared resources with other workers (N=11) based on content analysis of 322 personal web pages. Of the 167 advertisers associated with content creation sites, 51 created content with partners.

Social media use

Social media follower and following counts provided additional evidence for the size of social networks. Advertisers who used social media were associated with median 1 site (IQR 1-2, mean 1.7, SD 1). As part of the data gathering process 221 social media profiles from three major social media sites were downloaded for 189 advertisers (12 collective and 177 individual). Out of the original 221 profiles, 192 profiles used by 164 advertisers could be viewed. Of the pages that could not be viewed, 9 had been suspended, 4 required a login and 16 profiles were described as missing. Of the viewable profiles, 47 were private.

Figure 1 shows log scale distributions of followers and following counts. Advertisers typically had larger follower counts than following counts: median 959 followers (IQR 299.5-3039.5, mean 4361, SD 11407, N=187) and median 249 following (IQR 59-675, mean 621, SD 1008, N=187). The large difference between the mean and median values can be accounted for by a minority of advertisers who had very large followings on social media: 24 advertisers had over 10,000 social media followers with the largest social media presence exceeding 114800 followers. These counts may underestimate the number of social connections for advertisers who had accounts that had been suspended and were in the process of rebuilding their networks.

Figure 1: Log scaled social media follower and following count distributions. [Larger image.](#)



Discussion and conclusions

This study provides evidence for how sex work advertisers have diversified their use of the information and communications technologies during the later stages of the COVID-19 pandemic. The timing of data collection is significant as it was relatively late in the pandemic and advertisers would have had time to adjust to working in this new environment. Advertisers who used websites in their contact information advertised significantly longer and more frequently, and charged more for their services than other advertisers. These advertisers are demographically distinct in that they tended to be either more Anglophone and White or more likely to be part of a sexual minority (provide fetish services or be trans-female). It was clear that a significant proportion of the sampled advertisers are part of a very socially connected, affluent group with a long term commitment to the industry, a phenomenon seen in other research (Cunningham & Kendall, 2017; Nelson et al., 2020). The (Jiao et al., 2021) study, involving interviews with 35 industry participants, identified similar themes of screening; confidentiality, privacy, and disclosure; and malice all of which have direct correlates to themes identified in this study. It was notable that the majority of workers represented were associated with a relatively small number of collectives. The collective-associated workers and those advertising as individuals likely represent distinct subpopulations of indoor sex workers.

There are a few caveats to consider when reviewing the data. Not all advertisers who, for example, screen clients will mention this in ads or on a personal website, and some variables such as sexual orientation might not be mentioned if the advertiser fits the societal norm. Secondly, for those advertisers that represented collectives, attitudes expressed in advertising may not reflect the attitudes of workers represented by the advertising. Some of the identified

collectives, where the number of associated names were small, may be individual advertisers using multiple names.

Services have become more diverse

Following more than two years of pandemic related health measures, sex workers had diversified how they market services and the types of services offered. Other than incall and outcall, offered services could include web camming, phone sex, sexting, “dick rating”, being a virtual “girlfriend”, and selling self-generated content or products. However, there was little evidence that online services had replaced in-person sex work. Workers, especially those who are independent advertisers, likely make far more money providing in-person services compared to online. Out of the online services, content generation, arguably the safest, appeared to be the least profitable.

New financial technologies

It appears that financial technologies will disrupt the industry in the same way the adoption of ICTs and online advertising has over the last 23 years after the launch of Craigslist in 2001 (Encyclopaedia Britannica, 2023). Nevertheless, screening and deposits do not appear to have become universal. Given that deposits, and screening processes that require clients to send unadulterated copies of government issued ID, are likely the easiest and safest way for fraudulent advertisers to steal from prospective clients, clients are likely to be reluctant to cooperate with advertisers who require these unless the advertiser is well known. This concern was described by clients in (Horswill & Weitzer, 2016) where detecting safety and scams was an important topic of discussion among clients who were new to the industry. Use of review sites to identify fraudulent

advertisers, for example, serves a similar function to the informal networks used by sex workers to identify bad clients (Hudson, 2024; Strohmayer et al., 2019). The extent of fraud in classified advertising remains an open research question.

The size of social networks may have increased

Individual advertisers often participated in large social networks, a phenomenon discussed elsewhere in the literature (Jiao et al., 2021; Kennedy, 2022; Strohmayer et al., 2019). These networks are important for sex workers both in terms of attracting clients, interacting with peers, and safety. For some workers, these networks may be considerably larger than those in their “straight” life. Hudson (2024) describes the challenges involved in maintaining a social media presence in the face of the increasingly discriminatory practices of social media platforms. This was reflected in the sampled advertisers, many of whom had inaccessible or inactive profiles.

Sex workers’ social networks can be complex (Shushtari et al., 2018) involving both work related and nonwork related groups that can influence safer sex practices. Relationships between workers and third parties, workers and other workers, and workers and clients are all potentially significant both in terms of safety and economic prosperity. More work needs to be done to understand how Canadian sex workers make use of these distinct social circles and how they impact sex work practice.

Risk, trust and social capital

If the frequency that safety strategies are mentioned is any indication, advertiser concern for safety goes well beyond risks to health or physical harm, encompassing important financial

and emotional dimensions. Strategies to mitigate these risks overlapped as potentially dangerous clients were seen to identify themselves with inconsiderate, rude, or pushy behavior.

Social connection, direct or indirect, is perhaps a defining feature of safety for sex workers. Hudson (2024) categorizes the notion of safety as “Community”, “Anonymous Payments”, “Safe and Secure Work Environments”, “Support”, and “Blacklists” of dangerous clients, all of which are mediated by social networks. Community, defined as “being connected to other sex workers”, describes how workers have informally developed best practices for the industry that help their peers practice safely. Learning from peers is also important for workers unfamiliar with the more technically involved payment systems. Support and safe work environments both depend on access to third parties, where having someone to call before the start and after the end of a session, or in an emergency is essential. Hudson describes how these features can be compromised in an environment where there is little oversight and accountability on the part of service providers, such as financial institutions, or where access is restricted either by policy or high cost, the case with client blacklists, for example.

In a study of indoor workers in the U.K. the five most common risks experienced by workers were persistent unwanted contact (65.1%, N=417), which could also include threats (56.2%, N=360) and verbal abuse (49.1%, N=315). However, a majority of workers also experienced clients who attempted to either not pay, or underpay for the agreed-upon service (53.8%, N= 345) (Campbell et al., 2019). Sanders & Campbell (2007) describe how a community including workers, third parties, and clients “has taken security seriously” to prevent criminal threats.

This begs the question: do clients experience similar risks? Some research discusses the risks faced by clients (Lowman & Atchison, 2006; Sanders, 2020, Chapter 8). Lowman &

Atchison found that over 60% of the clients in a sample of 80 men from Vancouver, British Columbia had been victimized in the context of purchasing services, most commonly not receiving the agreed upon service (58%) or having property stolen from them (45%). Sanders et al. found that 18% of a sample of British clients had been victims of crime, with the most common scam being that of not providing the agreed upon service or the worker not showing up at the appointed time after a deposit had been made. For both workers and clients risks often consist of one party breaking a previously understood social contract.

As can be seen in the sampled advertisers, many make a substantial effort to identify like-minded clients. Furthermore, clients, like workers, often engage in a socialization process when they first encounter the industry. This socialization process, which can be seen on sex work review sites (Horswill & Weitzer, 2016), also occurs more broadly when clients and workers interact (Sanders, 2020, Chapter 8).

This socialization process could be said to represent a process of generating social capital. Social capital does not have a broadly agreed upon definition (Fukuyama, 2002) however most definitions agree that trust is a salient feature (Adler & Kwon, 2002; Bolin et al., 2003; Coleman, 1988; Haythornthwaite & Kendall, 2010; Islam et al., 2006; Leenders, 2014; Lippman et al., 2012). Indeed, in the context of online sex work advertising, a situation where risk is unavoidable, trust might be its most relevant aspect. In advertising, how advertisers and prospective clients build relationships is a form of *bridging* social capital, where two socially distinct groups attempt to create ties (Adler & Kwon, 2002; Putnam, 1995). The identified themes of privacy, consent, and respect show that many advertisers test prospective clients for trustworthiness during their initial interactions. Likewise, clients use resources to identify

trustworthy workers (Horswill & Weitzer, 2016). Advertising, social media, review sites (catering to both clients and workers), and personal websites all facilitate this process.

Social capital appears to be linked to security practice in that independent workers who expect high levels of trustworthy behavior, for example those who require screening before seeing prospective clients, appear to be more likely to use multiple technical means, such as social media, to attract a baseline community of potential clients. Likewise, more socially connected clients, such as those who have accessible online histories, appear to have better access to workers. Social connections create a feed forward process that enhances safety, where maintaining a good reputation ensures that clients and workers behave in an ethical manner.

How policy is failing us

For social capital to flourish, actors in the social environment need to be identifiable even if they maintain privacy. However, the hostile Canadian legal environment (PCEPA Protection of Communities and Exploited Persons Act, 2014) impedes this process as many clients may refuse to cooperate with safety strategies that could legally put them at risk. Notably, research from the U.K. reports that many crimes go unreported because of the hostile legal environment there (Campbell et al., 2019).

Sanders & Campbell (2007) describe how the unwillingness of policymakers to take the rights of sex workers seriously puts the responsibility for mitigating criminal acts on the victim rather than the perpetrator. Likewise, measures that criminalize clients mean that many clients would be unlikely to report crimes, including suspected human trafficking, for fear of being arrested. Further, this situation, as Campbell and Sanders describe it, also prevents the creation of legally binding contracts between workers and clients, putting everyone involved at risk.

Decriminalization, the case in New Zealand, has had the effect of increasing workers' rights (G. Abel et al., 2007). However, rights alone are not enough to mitigate inequality experienced by those connected to the industry as stigma and structural factors, described by some of the sampled advertisers, are also important drivers of inequality (G. M. Abel, 2014). What is needed, and what can be witnessed among many of the sampled advertisers, is an impetus for broader social change where sex work and sex workers are valued as an integral part of society.

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Declaration of interest statement

The authors have declared that no competing interests exist.

Supplemental Materials

All supplemental materials can be found at <https://osf.io/ba64d/>

S1 File. Regular expression for HTML text extraction. <https://osf.io/a5zmd>

S2 File. Spreadsheet containing coded texts. <https://osf.io/3tykh>

S3 File. Descriptive statistics. <https://osf.io/sbcpd>

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