Pregnancy intentions among female sex workers: recognising their rights and wants as mothers

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ABSTRACT

Objective To better understand the prevalence and correlates of pregnancy intentions among female sex workers (FSWs).

Design Cross-sectional analysis using data from an open prospective cohort of street and off-street FSWs in Vancouver, Canada, in partnership with local sex work and community agencies.

Methods FSWs were recruited through outreach to street and off-street locations (e.g. massage parlours, micro-brothels) and completed interviewer-administered questionnaires and HIV/sexually transmitted infection testing. Bivariable and multivariable logistic regression was used to evaluate correlates of pregnancy intention, based on a ‘yes’ or ‘no’ response to the question “Are you planning on have any (any more) children in the future?”.

Results Of the 510 women, 394 (77.3%) reported prior pregnancy, with 140 (27.5%) of the entire sample reporting positive pregnancy intentions. Regarding ethnicity, 35.3% were Caucasian and 26.3% were Asian/visible minority, with no differences in pregnancy intention by ethnicity or HIV status; 38.4% reported Canadian Aboriginal ancestry. In our final multivariable model, servicing clients in formal indoor settings, inconsistent condom use by clients, younger age, and intimate partner violence (IPV) were associated with pregnancy intention.

Conclusions FSWs may have pregnancy intention levels similar to that of women in other occupations.45 little is known about the and transmission, while overlooking the reproductive health (RH) needs and wants of this population.1 FSWs have been negatively portrayed in the media, by the public, and often by public health providers as ‘vectors of disease’,1 immoral women and/or criminals, and they are rarely viewed in their role as parents, perhaps because they do not conform to society’s perception of ‘good mothers’.2 Diverted research and practice attention from the reproductive rights and needs of female FSWs also may contribute to the high level of unmet reproductive need among this population.3 Understanding the pregnancy intentions of FSWs is necessary to inform comprehensive public health programmes that can meet their reproductive needs and desires.

INTRODUCTION

Though risks for HIV and pregnancy are intimately intertwined, research on female sex workers (FSWs) has focused almost exclusively on disease prevention and transmission, while overlooking the reproductive health (RH) needs and wants of this population.1 FSWs have been negatively portrayed in the media, by the public, and often by public health providers as ‘vectors of disease’,1 immoral women and/or criminals, and they are rarely viewed in their role as parents, perhaps because they do not conform to society’s perception of ‘good mothers’.2 Diverted research and practice attention from the reproductive rights and needs of female FSWs also may contribute to the high level of unmet reproductive need among this population.3 Understanding the pregnancy intentions of FSWs is necessary to inform comprehensive public health programmes that can meet their reproductive needs and desires.
pregnancy intentions of this population, particularly among FSWs in industrialised settings such as in North America. The few empirical studies that have explored FSWs’ RH and pregnancy patterns were conducted among non-drug using FSWs in non-industrialised countries, and did not explicitly investigate pregnancy intentions. Instead, these studies documented levels of abortions as a proxy measure of unintended pregnancy, which probably underestimates the true rate of unintended pregnancy by not accounting for unintended pregnancies resulting in live births or those that ended in spontaneous abortion. These and most other existing studies assessed pregnancy intention retrospectively (i.e. pregnancy intentions before vs after conception, or using unintended pregnancy as a proxy for pregnancy intention), and did not have the capacity to capture true levels of pregnancy intentions.

While we identified no studies examining pregnancy intentions among FSWs, pregnancy intention studies among marginalised populations and women living with HIV may contribute to our understanding of pregnancy intentions among FSWs, given high rates of HIV (23% among street-based FSWs) and marginalisation among this population. A recent study among HIV-positive women of reproductive age living in Vancouver, Canada revealed pregnancy intention levels approaching that of the general population, with age, marital status and ethnicity being significant predictors of wanting to become pregnant. In other studies, pregnancy intentions of persons living with HIV/AIDS have been shown to vary according to a variety of other individual and social factors, including parity, social expectations and cultural norms, and knowledge of mother-to-child-transmission of HIV. Social networks, such as immediate and extended family members and friends, also significantly impact women’s pregnancy desires and intentions through approval or encouragement of childbearing, including the intentions of intimate partners.

The enforcement of Canada’s sex work laws has been posited to fuel stigma (including stigma towards parenting FSWs), and to reduce access to health services, which may deter FSWs from wanting to start a family. However, the legal landscape of sex work in Canada is changing, with a recent (December 2013) Supreme Court of Canada decision striking down three criminal sanctions targeting sex work that had harmful consequences on FSWs’ health and safety.

There is limited literature regarding the pregnancy intentions of marginalised women. We found no empirical studies measuring correlates of prospective pregnancy intentions among FSWs. This study therefore sought to examine the correlates of pregnancy intention among a cohort of FSWs in Vancouver, Canada. Gaining an understanding of the pregnancy intentions of FSWs is an important first step in identifying their RH needs and in developing recommendations for policy and programming that will improve RH rights, access and outcomes for FSWs in Vancouver and elsewhere.

METHODS
Study design
Sampling
These analyses drew on cross-sectional data from an open prospective cohort of street and off-street FSWs in Vancouver, in partnership with local sex work and community agencies. The sample used AESHA (An Evaluation of Sex Workers’ Health Access) baseline data collected between January 2010 and October 2011. As in a previously reported study, eligibility criteria included being female (inclusive of transgender) and having exchanged sex for money within the past month. As in our previous studies, FSWs were recruited using time-location sampling both at outdoor venues (e.g. streets, alleys) and indoor sex work venues (e.g. massage parlours, micro-brothels and FSWs’ homes) through daytime and late-night outreach. Online recruitment targeting online solicitation spaces was also used. Time-space sampling is a strategy that recruits hard-to-reach populations by sampling in places and times where they often congregate, and uses physical spaces, rather than persons, as the primary sampling unit. As previously, community mapping with former/current FSWs was employed to locate sex work venues and spaces or ‘strolls’.

Instrument
Participants were required to provide informed consent prior to completing an interviewer-administered questionnaire. The questionnaire elicited a wide range of information, described in detail below. In addition, a project nurse administered a brief health-related questionnaire that elicited information on the broader sexual, reproductive and physical health needs of women, including pregnancy history, pregnancy intentions, contraceptive usage and health services access. Following the pre-test counseling, blood was drawn for syphilis, HSV-2 antibody and hepatitis C virus testing. HIV was screened for using INSTI™ (Biolytical Laboratories, Richmond, BC, Canada) rapid tests (followed by Western blots to confirm positive tests). Urine samples were also collected to test for gonorrhoea and chlamydia. Participants were compensated for their time and expertise with Canadian $40 at baseline and at each follow-up visit for their time and expertise. The study received ethical approval from University of British Columbia’s Research Ethics Board.

Dependent variable
The dependent variable, pregnancy intention, was defined as a response of “yes trying to become pregnant now” or “yes in the future” or “yes, currently...
pregnant” vs “no” to the following survey item: “Are you planning/hoping to have any (more) children in the future?”

Independent variables
Independent variables were considered based on a priori knowledge from the literature as well as other hypothesised confounders. Age was measured as a continuous variable, and ethnicity was defined as Caucasian, Canadian Aboriginal/indigenous ancestry (inclusive of First Nations, Métis, Inuit and non-status First Nations) or Asian/visible minority (Chinese, Vietnamese, Thai, Filipina, Indian, Pakistani, Bangladeshi, Black, Latina). Other socio-demographic factors considered included migrant status (not born in Canada vs born in Canada) and educational status (high school graduate vs less than high school education). Individual drug use patterns of interest were: past 6 months use of injection and non-injection drugs (excluding marijuana and alcohol). In the light of the pregnancy intentions literature, we also accounted for interpersonal factors such as having had a male intimate partner (non-commercial) within the previous 6 months and inconsistent condom use by clients and intimate partners.12

Given the documented association between intimate partner violence (IPV) and unintended pregnancy,25–27 we used the World Health Organization standardised scale for IPV (V9) that captures any or all of physical, sexual and emotional violence perpetrated by a primary male intimate/sexual partner in the past 6 months.28 Client-perpetrated physical and/or sexual violence within the past 6 months was also included in our analysis. Since pregnancy history and parity have also been documented as predictors of pregnancy desires/intention,11 we accounted for number of pregnancies, number of children in the mother’s custody, whether a child had ever been removed by child welfare services, and any barriers to pregnancy and mothering services (yes vs no) in our analysis.

Finally, since we hypothesised that contraceptive usage (inconsistent condom use by clients, and use of hormonal contraceptives (birth control pills, injectable hormones)) or work environmental factors of interest such as place of servicing clients, could influence pregnancy intentions, these variables were also included in our analysis. Primary place of servicing clients was categorised as street/public spaces; informal indoor spaces (e.g. bars, saunas, hourly rental rooms); and formal sex work establishments (e.g. brothels/quasi brothels, massage parlours, beauty establishments).

Statistical analyses
The analytic sample was restricted to those women who provided a valid response to the pregnancy intentions question, resulting in a final sample size of 510 participants. Initially, we examined bivariate associations between individual, drug-related, interpersonal and environmental variables with pregnancy intentions. For these comparisons, we employed Pearson’s chi-square ($\chi^2$) test for analysis of dichotomous, categorical variables and Wilcoxon rank sum test for continuous variables. Logistic regression was used to generate odds ratios (ORs) with 95% confidence intervals (95% CI) generated for all categorical dichotomous variables. When observations were less than or equal to five, Fisher’s exact test of probability was used to generate $p$ values. Variables with $p$ values <0.20 were included in the multivariable logistic regression model and Akaike Information Criteria (AIC) selection was employed to arrive at the final multivariable model.

The final model was tested for multi-collinearity. Two variables (having a male intimate partner and inconsistent condom use with an intimate partner) were removed from the model due to collinearity with (physical, emotional or sexual) IPV in the last 6 months. Given the significant association between the IPV variable and both ‘having a male intimate partner’ and ‘inconsistent condom use with an intimate partner’, as well as literature suggesting that IPV is high among pregnant and parenting women,25–27 IPV was therefore considered the more important variable to include. The adjusted odds ratios (AORs) and $p$ values were calculated for variables remaining in the final model after AIC selection (displayed in online Supplementary Table S2). As in previous studies,29 variables that retained significance at the $p<0.05$ level in the multivariable model after adjusting for potential confounders were considered statistically significant. Variables with $p$ values <0.10 in our final multivariable model were considered marginally significant, as in previous studies.30–32

RESULTS
Of 510 women, 140 (27.5%) expressed an intention to have (more) children. Sample characteristics are presented in online Supplementary Table S1, stratified by pregnancy intention. The median age for women expressing pregnancy intention was 29 [interquartile range (IQR) 25–35], compared to a median of 38 (IQR 31–44) among those not desiring children. There were no differences in pregnancy intentions by ethnicity, with 49 (34.0%) women with Aboriginal ancestry, 50 (34.9%) Caucasian and 44 (30.8%) Asian women (primarily migrant/new immigrant workers) indicating wanting (more) children. Approximately half (49.8%) of our sample had a high school education, and 32% reported homelessness in the past 6 months.

Online Supplementary Table S2 displays bivariate and multivariable associations with pregnancy intentions. In multivariable analysis, inconsistent condom use by clients (AOR=1.95; 95% CI 1.11–3.43; $p=0.002$), servicing clients in formal indoor spaces vs public outdoor spaces (AOR=1.95; 95% CI 1.17–3.26;
Though the level of pregnancy intention and this may often be the only source of life satisfaction, non-judgmental, supporting the use of barrier contraception.
provide a safer, more stable environment that may better support women’s intentions to have children. This hypothesis is supported by qualitative research that suggests that maintaining secrecy about FSWs’ work from friends, family and their children is a priority for parenting FSWs. In addition to potentially offering a form of privacy, formal indoor environments may offer greater and/or more stable financial remuneration compared to outdoor sex work or other informal sex work arrangements, as well as the potential to access social support networks within the work environment, which may affect FSWs’ pregnancy intentions.

Given the recent changes to Canada’s criminal code, these findings highlight a need to pursue a framework that promotes FSWs’ health and safety, and improves access to formal indoor establishments that may better support their reproductive right to have children. A decriminalisation framework may offer these benefits. This has had positive impacts on FSWs’ health and safety in New Zealand since its inception in 2003, including reduced violence and improved access to health care and support services.

Our finding of greater pregnancy intention among younger women is consistent with the literature, and may be explained by lower parity and unfulfilled pregnancy desires among younger women. Younger FSWs in our setting have been shown to have increased health risks due to elevated levels of homelessness, and avoidance of health and support services, which may have serious consequences on the RH of FSWs and their children.

Together, these findings highlight a critical need for accessible and targeted RH services that support FSWs’ reproductive choice, from pregnancy prevention (e.g. contraception, abortion services) through to pregnancy and child rearing (e.g. family planning, perinatal care, parental support services). Given the close ties between HIV and pregnancy, innovative service delivery models that integrate HIV and RH services (e.g. HIV integrated into RH services or vice versa) may hold promise.

Additionally, these findings concur with previous studies that suggest that the geographical location and method of service delivery are paramount to promoting health care access among FSWs. In particular, integrated services within close proximity to FSWs’ workplaces or homes, or outreach to FSWs’ workplaces, may provide immense benefit in mitigating existing elevated levels of harms faced by them and help interrupt a pattern of accumulating damage over their life course and that of their children. Examples of accessible, innovative models include the Esselen Street Clinic in Johannesburg, South Africa that provides (on-site and mobile) integrated RH/HIV services, and the Sheway project in Vancouver that offers woman-centred, harm-reduction treatment services, and parental support to mothers and their families.

This study has a number of limitations. The clandestine nature of sex work makes identifying a sampling frame, and randomly selecting participants that are representative of the population, a challenge. To address this limitation, time-space sampling and social mapping were used that systematically sample women at times and locations where they often congregate. Due to the sensitive nature of the topic, social desirability bias cannot be excluded and may have resulted in underreporting of pregnancy intention. Using a dichotomous measure of pregnancy intention (i.e. intending to become pregnant vs not intending to become pregnant) may not capture ambivalence with regard to pregnancy intentions, which has been associated with higher numbers of pregnancies compared to women who definitely did not want children in lower-middle income countries (e.g. Morocco, Malaysia). Finally, given that our study findings are specific to FSWs in an urban North American setting, our study findings may not be generalisable to FSWs in other settings, particularly those with differing policies and outlook on sex work.

CONCLUSIONS AND FUTURE DIRECTIONS

These findings suggest that FSWs may have pregnancy intentions similar to women in other occupations, challenging widely held assumptions. They indicate a need for integrated HIV, RH and harm reduction services that cater to the needs of women experiencing IPV and inconsistent condom use with clients. Such services should support FSWs’ choices (i.e. provide contraception, termination, pre- and postnatal care and child-bearing supports), offer (or link to) counselling and respite from abusive relationships, and be delivered at or near FSWs’ workplaces. Alternative legal frameworks such as the decriminalisation of sex work might further improve FSWs’ reproductive rights to have children by increasing access to formal indoor sex work establishments and encouraging the delivery of targeted, integrated services at or near these locations.

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