

Factors associated with violence against female sex workers in ten Brazilian cities

Fatores associados à violência contra mulheres profissionais do sexo de dez cidades brasileiras

Factores asociados a la violencia contra mujeres profesionales del sexo de diez ciudades brasileñas

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Abstract

Few studies in Brazil have focused on violence against female sex workers, a theme that has attracted researchers' attention worldwide, especially due to possible associations with HIV. The current study aims to estimate the prevalence of violence against female sex workers according to type and perpetrator and to identify associated factors. A cross-sectional study was conducted with data on 2,523 female sex workers from ten Brazilian cities, and with the respondent-driven sampling (RDS). Prevalence of verbal violence was 59.5%, physical violence 38.1%, sexual violence 37.8%, intimate partner physical violence 25.2%, and violence by clients 11.7%. Factors associated with physical violence were age < 30 years (aOR = 2.27; 95%CI: 1.56-3.29), drug use (aOR = 2.02; 95%CI: 1.54-2.65), and price of trick ≤ BRL 29.00 or USD 9.00 (aOR = 1.51; 95%CI: 1.07-2.13). In conclusion, Brazilian female sex workers suffer a disproportional burden of violence. The identification of vulnerability factors is essential for interventions to safeguard human rights and control HIV.

Sex Workers; Workplace Violence; Violence Against Women; HIV

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Introduction

Although gender-based violence has been recognized and discussed for decades as a global public health and human rights problem that causes high morbidity and mortality in women, such discussions rarely include human rights violations and abuses suffered by female sex workers. In addition to suffering violence in their private lives, sex workers are vulnerable to violence from the specificities of their work activity, perceived by society as illegal, where they are stigmatized and socially and politically marginalized ¹.

Violence against female sex workers is not distinct from violence against women, based primarily on gender inequality, especially the patriarchal order, with power relations and hierarchical constructions of maleness and femaleness as the problem's predominant and widespread motor force. In addition, the burden of stigma and stereotypes historically constructed and attributed to prostitutes perpetuates a wide range of expressions of violence experienced by these women in their daily lives, from insults to murder ².

More recently, motivated mainly by potential associations between violence and sexually transmitted diseases (STDs), especially HIV, researchers have shown growing interest in the type and extent of violence against female sex workers, spawning a growing number of studies worldwide. Most of these studies have focused on potential transmission of these infections from female sex workers to clients and partners and thus the spread of sexually transmitted infections to the general population ³.

This reality has fed increasing international interest in the prevention and fight against violence to sex workers. Especially in recent decades, research has approached the multiple dimensions and facets of violence in the sex trade in its different historical and social contexts. Studies have shown that the extent and nature of the violence experienced by these women are diverse and interwoven by a set of factors related to the sex trade, intersecting with macro-structural factors proper to the state and institutions that reproduce the conditions that generate violence, notably the criminalization of sex work ⁴.

A review of the international literature ⁵ on violence against female sex workers showed that lifetime prevalence of any violence combined with workplace violence varied from 45% to 75%, and the same in relation to the previous year ranged from 32% to 55%.

In Brazil, there are few epidemiological studies on violence against female sex workers. Quantitative descriptive studies in municipalities (counties) in Northeast Brazil have shown results that are consistent with the literature in terms of the high burden of abuse to female sex workers. Ximenes Neto et al. ⁶, in a study of female sex workers in Sobral, Ceará State, found that 30% had suffered physical violence, 12.5% sexual violence, and 10% psychological violence. In Picos, Piauí State, Penha et al. ⁷ found that 60.5% of female sex workers participating in the study reported a history of psychological violence, 30.2% physical violence, and 3.2% sexual violence.

The current study thus aimed to estimate the prevalence of violence against female sex workers in ten Brazilian cities, according to type of violence and perpetrators, in addition to identifying the factors associated with such violence.

Method

A cross-sectional study was performed with data from 2,523 questionnaires completed by female sex workers in ten Brazilian cities (Brasília, Rio de Janeiro, Salvador, Santos, Itajaí, Belo Horizonte, Manaus, Recife, Curitiba, and Campo Grande) who participated from August 2008 to July 2009 in a study called *Current of Health*, under the Department of Sexually Transmissible Diseases/AIDS and Viral Hepatitides (DDST/AIDS) of the Brazilian Ministry of Health, the aim of which was to estimate prevalence rates for HIV and syphilis and measure knowledge, attitudes, and practices related to HIV infection and other sexually transmissible diseases.

The cities were selected by the DDST/AIDS based on their geographic location and magnitude of the HIV/AIDS epidemic. Sampling was proportional to the population of female sex workers in each city, with a minimum size set at 100 women. The size was calculated based on an estimated 6.0% HIV

prevalence in female sex workers, with 95% confidence interval (95%CI), 1.3% two-tailed error, type I error p -value < 0.05 , and design effect of 2⁸.

Female sex workers were recruited with respondent-driven sampling (RDS) technique conceived by Heckathorn⁹. The method is a variant of chain-based sampling, assuming that members of a hard-to-reach population are recruited more easily by their peers. A mathematical model is used to weigh the sample and compensate for non-random selection bias and for over-representation of some subgroups of the target population, assuming that the final sample is representative of the relational group or network to which the individuals belong.

In each city, five to ten initial participants were selected, called “seeds”. The choice was intentionally not random, in order to include female sex workers with different socio-demographic characteristics and from different work settings, both outdoor (streets) and indoor (nightclubs, brothels, massage parlors, hotels, etc.). Each seed received three coupons to invite women they knew, constituting the study’s first “wave”, and who in turn recruited other peers, and so on, until reaching the stipulated sample size. The sample thus consisted of successive recruitment cycles or waves in each city.

Data were collected by self-completion of the audio computer-assisted self-interview in computers equipped with earphones, in which the female sex workers read and/or listened to the questions and possible answers in private. In case of doubts there was a researcher present to answer questions.

The project was approved by the Institutional Review Board of the Oswaldo Cruz Foundation (case n. 395-07). Previous articles have presented the method’s premises, proposed data analysis procedures, and the RDS process in the ten Brazilian cities^{8,10}.

The analysis in the current study focuses on the questions in the module “Discrimination and Violence”. Selection of the variables was based on evidence identified in the literature and Brazilian Ministry of Health guidelines. The occurrence of violence was the outcome variable, analyzed in relation to socio-demographic factors (age, schooling, race/color, monthly income); type of participation in the sex trade, measured as the place of sex work – streetwalking versus indoor premises; cost charged per trick; HIV serological status based on the results of rapid tests performed during the study; safe sex practices (inconsistent condom use, defined as non-use in any type of sexual practice or with any type of partner); and use of alcohol and other drugs. In the multivariate analyses, income was replaced by the cost of trick due to colinearity.

The target outcomes were: verbal violence; physical violence by any aggressor, by intimate partner, by client, by family member, and by the police in the previous 12 months. With regard to sexual violence, only prevalence was estimated, and it was not included in the analyses since the question only specified “any time in life”, which prevented identifying its occurrence in relation to sex work, in addition to not identifying the aggressor, thus differing from the other types of violence that were analyzed.

The analysis used appropriate statistical methods for the collected data and a complex sampling design. We thus considered the dependence between the observations resulting from respondent-driven sampling and the unequal selection probabilities, which result from the participants’ varying network sizes⁸. The original authors of RDS propose weighting the same with probability of selection inversely proportional to each participant’s network size. In this study, the question used to measure the participant’s network size and for weighting was: “How many female sex workers that work here in the city do you know personally?”, assuming that RDS recruitment follows a Markov process, in which recruitment relations are determined by direct recruitment and not by recruiter members from previous waves. In addition, since the study was performed in ten cities, the sample was weighted by the size of the population of women 18 to 59 years of age in each city, assuming the same proportion of female sex workers in all the cities and considering each city as a stratum⁸.

The bivariate analyses used prevalence as the measure of frequency and prevalence ratio as the measure of association, using 95%CI. Significance was set at $p < 0.05$.

Non-hierarchical logistic regression models were constructed to adjust for confounding between factors identified as significant in the bivariate analyses or relevant to the study question. We also controlled for the so-called “homophilia effect” (the tendency of persons selected for a study to recruit peers with similar characteristics to their own), by including, among the independent variables, the outcome variable corresponding to that of the recruiter.

The analyses were performed with the software SPSS (SPSS Inc., Chicago, USA), with the data-bank already properly weighted, considering complex sampling adequate for RDS.

Results

Of the 2,523 female sex workers participants in the study, 54% were 18 to 29 years of age. Schooling was low: 59.2% had not finished primary school; 76.1% stated they were non-white; 79.6% reported not being married or living with a partner; 45% reported monthly income less than BRL 600.00 (approximately USD 200); only 34.2% owned their own home; and 35.4% reported some other work besides the sex trade (Table 1). The great majority (80.2%) had children.

The majority (58%) reported sexual initiation at 15 years or younger (44.6% between 13 and 15 years and 13.4% at 12 or younger). 37.5% reported working in the sex trade for three years or less.

As for place of sex work, the majority (61.3%) reported working in indoor premises (bars, night-clubs, hotels/motels), compared to 38.7% streetwalking. As for cost of tricks, the majority (58.1%) charged from BRL 1.00 and 49.00 (USD 0.30-12.00), while 77.2% reported turning one to five tricks per day (Table 2).

As for alcohol and drugs, 73.7% reported that they consumed alcohol and 30.9% used drugs such as marijuana, cocaine, crack, *merla*, etc. (Table 2). Asked about the use of these substances before or during sexual relations, only 10% never drank and 29% never used drugs.

Prevalence of discrimination and violence and associated factors

In this study, the majority of women (66.4%) felt discriminated against in the 12 months prior to the study. The principal reasons were: discrimination based on their profession and lack of money or low social status; 59.5% reported verbal violence; 38.1% physical violence by any aggressor. Intimate partner physical violence was reported by 25.2%; by family member or known person 16.6%; by a client 11.7%; and by the police 7.9%. Sexual violence any time in life was reported by 37.8% of the female sex workers.

Verbal violence

In multivariate analysis, verbal violence was associated with low cost of tricks, less than BRL 29.00 or USD 9.00 (aOR = 2.16, 95%CI: 1.52-3.08), drugs and alcohol, and age 18 to 29 or 30 to 39 years (Table 3).

Physical violence

Physical violence was associated with age 18 to 29 years (aOR = 2.27; 95%CI: 1.56-3.29), drug use (aOR = 2.02; 95%CI: 1.54-2.65), alcohol, low schooling, and black skin color (Table 3).

Perpetrators of physical violence

Intimate partners were the principal aggressors of female sex workers. Intimate partner physical violence was associated with inconsistent condom use in any situation (aOR = 1.99; 95%CI: 1.27-3.11), age 18 to 29 years (aOR = 1.92; 95%CI: 1.23-2.99), age 30 to 39 years, and drugs and alcohol (Table 4).

Factors associated with physical abuse by family members or known persons were: age 18 to 29 years (aOR = 2.80; 95%CI: 1-71-4.61), drugs (aOR = 1.72; 95%CI: 1.21-2.43), low schooling (aOR = 1.62; 95%CI: 1.11-2.36), and age 30 to 39 years (Table 4).

Physical violence by clients was associated with age 18 to 29 years (aOR = 2.24; 95%CI: 1.24-3.75), cost of tricks up to R\$ 29.00 (aOR = 2.09; 95%CI: 1.29-3.38), streetwalking (aOR = 1.86; 95%CI: 1.31-2.66), alcohol (aOR = 1.57; 95%CI: 1.19-2.06), and drugs (aOR = 1.47; 95%CI: 1.02-2.01) (Table 5).

Physical violence by the police was associated with drugs (aOR = 2.54; 95%CI: 1.61-3.99), low schooling (aOR = 2.21; 95%CI: 1.34-3.51), streetwalking (aOR = 1.80; 95%CI: 1.15-2.82), and age 18 to 29 years (aOR = 2.03; 95%CI: 1.09-3.79) (Table 5).

Table 1

Social and demographic characteristics of female sex workers in ten Brazilian cities.

Variable	n (N = 2,523)	%
Age (years)		
18-24	858	34.0
25-29	516	20.5
30-34	412	16.3
35-39	272	10.8
40-49	292	11.6
50-59	143	5.7
≥ 60	30	1.2
Schooling		
Incomplete primary	1,493	59.2
Incomplete secondary	599	23.7
Complete secondary or more	431	17.1
Race/Color		
White	604	23.9
Black	717	28.4
Brown	962	38.1
Other	240	9.5
Monthly income (Brazilian Reais)		
1.00-299.00	471	18.6
300.00-599.00	665	26.4
600.00-1,199.00	600	23.8
1,200.00-2,999.00	373	14.8
≥ 3,000.00	73	2.9
Doesn't know/No answer	341	13.5
Conjugal status		
Never married	1,332	52.8
Married/Lives with partner	514	20.3
Separated/divorced	545	21.6
Widow	132	5.2
Other work besides sex work		
Employed with formal work papers	113	4.5
Employed without formal work papers	256	10.1
Self-employed	524	20.8
None	1,630	64.6
Housing status		
Own house or apartment	863	34.2
Rented house or apartment	804	31.9
Other (boarding house/workplace)	856	33.9

Discussion

The majority of female sex workers in this study reported brown or black skin color and were young, single, and with low schooling and low income. More than one-third walked the streets and had worked in the sex trade for three years or less. Kerrigan et al.¹¹ observed a similar profile in another study of sex workers in Rio de Janeiro.

The structural components of this profile, rooted in gender and class inequalities, reflect fundamental human rights violations and thus the high vulnerability of these women to violence, margin-

Table 2

Characteristics of sex work and alcohol and drug use in female sex workers in ten Brazilian cities. Brazil, 2009.

Variable	n (N = 2,523)	%
Place of sex work		
Streets	966	38.7
Indoor premises	1,557	61.3
Time in sex work (years)		
< 1	185	7.3
1-3	755	29.9
4-9	763	30.2
10-19	493	19.5
≥ 20	314	12.4
No information	14	0.7
Cost of trick (Brazilian Reais)		
1.00-29.00	841	33.3
30.00-49.00	626	24.8
50.00-99.00	592	23.5
≥ 100.00	464	18.4
Tricks/day		
1-5	948	77.2
6-10	406	16.1
≥ 11	169	7.7
Alcohol consumption		
Several times a week/Every day	700	27.7
Once a week or less	1,160	46.0
Never	663	26.3
Any type of drug use (marijuana, cocaine, crack, <i>merla</i> , etc.)		
Once a month or more	779	30.9
Never	1,745	69.1
Cocaine		
Once a month or more	494	19.6
Never	2,029	80.9
Crack or <i>merla</i>		
Once a month or more	211	8.4
Never	2,312	91.6

alizing them and limiting their opportunities and the capacity to reduce the risks from their sexual activity, including HIV infection. A growing number of studies have demonstrated the convergence of structural factors and indirect risks ^{5,12,13}.

A study on prevalence of gender violence against streetwalking female sex workers in Vancouver, Canada, found that 57% had suffered violence, correlated directly with macro-structural factors: lack of housing, criminalization of sex work, and difficult access to drug addiction treatment. The authors observed that these macro-structural factors led to individual risk practices, such as: serving clients in cars or public places; shifting to areas far removed from the main streets due to police harassment; and drug use, among others ¹⁴.

Consistent with data from the literature, the current study's results demonstrate the variety of factors related to violence suffered by female sex workers in ten Brazilian cities. All the forms of violence studied here were associated with socio-structural and individual factors, with a varying force

Table 3

Bivariate and multivariate analyses of factors associated with verbal and physical violence by any aggressor against female sex workers in ten Brazilian cities. Brazil, 2009.

Factors	Verbal violence						Physical violence by any aggressor					
	PR	Bivariate 95%CI	p- value	aOR	Multivariate 95%CI	p- value	PR	Bivariate 95%CI	p- value	aOR	Multivariate 95%CI	p- value
Age (years)												
18-29	1.09	0.99-1.20	0.063	1.73	1.22-2.45	0.002	1.49	1.27-1.73	0.000	2.27	1.56-3.29	0.000
30-39	0.92	0.83-1.02	0.121	1.88	1.30-2.71	0.001	1.04	0.88-1.22	0.650	1.72	1.16-2.55	0.007
≥ 40	1.00											
Race/Color												
Black	1.06	0.95-1.17	0.314	1.04	0.79-1.37	0.785	1.28	1.09-1.49	0.002	1.37	1.03-1.83	0.031
Non-black	1.00											
Schooling												
Incomplete primary	0.99	0.89-1.09	0.797	0.94	0.73-1.22	0.663	1.16	1.00-1.35	0.045	1.32	1.01-1.73	0.044
Complete primary or more	1.00											
Place of sex work												
Streets	0.88	0.76-1.01	0.070	0.83	0.63-1.08	0.164	1.01	0.92-1.11	0.796	1.15	0.88-1.49	0.306
Indoor premises	1.00											
Cost of trick (Brazilian Reais)												
1.00-29.00	1.14	1.03-1.27	0.016	2.16	1.52-3.08	0.000	1.18	1.00-1.39	0.048	1.51	1.07-2.13	0.019
30.00-99.00	0.96	0.87-1.06	0.405	1.52	1.15-2.01	0.003	1.05	0.91-1.21	0.510	1.13	0.85-1.50	0.415
≥ 100.00	1.00											
Alcohol consumption												
Yes	1.16	1.03-1.30	0.010	1.31	1.11-1.55	0.002	1.48	1.23-1.77	0.000	1.48	1.24-1.77	0.000
No	1.00											
Drug use												
Yes	1.29	1.18-1.42	0.000	1.64	1.24-2.17	0.001	1.81	1.58-2.09	0.000	2.02	1.54-2.65	0.000
No	1.00											
Inconsistent condom use												
Yes	1.24	1.07-1.44	0.002	1.44	1.03-2.02	0.036	1.18	1.07-1.30	0.003	1.37	0.96-1.94	0.079
No	1.00											
HIV serological status												
Positive	1.01	0.74-1.40	0.926	0.96	0.51-1.82	0.899	1.26	0.97-1.64	0.050	1.59	0.88-2.89	0.128
Negative	1.00											

95%CI: 95% confidence interval; aOR: adjusted odds ratio; PR: prevalence ratio.

of association for each type of violence and aggressor. In the multivariate analyses, drug use showed the strongest association and statistical significance with the type of violence (verbal and physical) and all the perpetrators (intimate partners, family members/known persons, clients, and police). Alcohol use showed similar associations and significance, except for violence perpetrated by family members or known persons and the police.

Other studies ^{5,15} have evidenced that the use of these substances combined with stigmatization and criminalization of sex work converge to maintain high-risk scenarios, fostering violence in the

Table 4

Bivariate and multivariate analyses of factors associated with physical violence by intimate partners and family members against female sex workers in ten Brazilian cities. Brazil, 2009.

Factors	Intimate partner physical violence						Physical violence by family member of known person					
	PR	Bivariate		Multivariate			PR	Bivariate		Multivariate		
		95%CI	p-value	aOR	95%CI	p-value		95%CI	p-value	aOR	95%CI	p-value
Age (years)												
18-29	1.30	1.07-1.59	0.008	1.92	1.23-2.99	0.004	1.71	1.30-2.26	0.000	2.80	1.71-4.61	0.000
30-39	0.98	0.79-1.21	0.875	1.63	1.04-2.55	0.032	1.19	0.87-1.63	0.279	1.83	1.08-2.09	0.024
≥ 40	1.00											
Race/Color												
Black	1.21	0.99-1.49	0.071	1.16	0.85-1.58	0.343	1.41	1.07-1.85	0.015	1.34	0.94-1.90	0.101
Non-black	1.00											
Schooling												
Incomplete primary	1.22	0.99-1.49	0.053	1.33	0.98-1.79	0.067	1.38	1.05-1.83	0.022	1.62	1.11-2.36	0.012
Complete primary or more	1.00											
Place of sex work												
Streets	1.01	0.83-1.24	0.085	1.11	0.83-1.48	0.479	0.91	0.75-1.28	0.891	1.06	0.76-1.48	0.729
Indoor premises	1.00											
Cost of trick (Brazilian Reais)												
1.00-29.00	1.21	0.971-1.51	0.096	1.33	0.90-1.97	0.152	1.04	0.76-1.43	0.793	1.05	0.67-1.64	0.834
30.00-99.00	1.05	0.86-1.28	0.623	1.11	0.80-1.54	0.524	1.01	0.78-1.31	0.934	1.04	0.72-1.51	0.825
≥ 100.00	1.00											
Alcohol consumption												
Yes	1.53	1.20-1.99	0.000	1.47	1.21-1.80	0.000	1.32	0.97-1.81	0.075	1.20	0.95-1.51	0.126
No	1.00											
Drug use												
Yes	1.85	1.53-2.24	0.000	1.68	1.25-2.26	0.001	1.94	1.50-2.49	0.000	1.72	1.21-2.43	0.002
No	1.00											
Inconsistent condom use												
Yes	1.85	1.30-2.60	0.000	1.99	1.27-3.11	0.003	1.25	0.85-1.83	0.253	1.10	0.69-1.77	0.690
No	1.00											
HIV serological status												
Positive	1.36	0.94-1.97	0.119	1.46	0.80-2.68	0.218	1.41	0.86-2.29	0.184	1.52	0.75-3.09	0.246
Negative	1.00											

95%CI: 95% confidence interval; aOR: adjusted odds ratio; PR: prevalence ratio.

context of the sex trade. This imposes various vulnerabilities, perversely marking all forms of violence against female sex workers.

In this study, most of the women had experienced discrimination in the previous 12 months, and the principal reasons were: discrimination due to their profession and lack of money or low social

Table 5

Bivariate and multivariate analyses of factors associated with physical violence by clients and police against female sex workers in ten Brazilian cities, Brazil, 2009.

Factors	Physical violence by clients						Physical violence by police					
	PR	Bivariate 95%CI	p- value	aOR	Multivariate 95%CI	p- value	PR	Bivariate 95%CI	p- value	aOR	Multivariate 95%CI	p- value
Age (years)												
18-29	1.38	1.01-1.87	0.040	2.24	1.24-3.75	0.002	1.36	0.96-1.94	0.084	2.03	1.09-3.79	0.026
30-39	1.08	0.78-1.50	0.643	1.60	0.94-2.72	0.081	0.99	0.67-1.46	0.962	1.72	0.92-3.20	0.089
≥ 40	1.00											
Race/Color												
Black	1.47	1.00-1.99	0.016	1.38	0.95-2.01	0.093	1.64	1.15-2.36	0.007	1.51	0.98-2.34	0.063
Non-black	1.00											
Schooling												
Incomplete primary	1.39	1.02-1.91	0.034	1.30	0.88-1.93	0.193	2.17	1.43-3.31	0.000	2.21	1.34-3.51	0.001
Complete primary or more	1.00											
Place of sex work												
Streets	1.07	1.02-1.11	0.002	1.86	1.31-2.66	0.001	1.64	1.15-2.34	0.006	1.80	1.15-2.82	0.010
Indoor premises	1.00											
Cost of trick (Brazilian Reais)												
1.00-29.00	1.86	1.36-2.54	0.000	2.09	1.29-3.38	0.003	1.39	0.96-2.01	0.081	0.97	0.57-1.66	0.905
30.00-99.00	1.22	0.91-1.63	0.178	1.13	0.75-1.71	0.546	1.23	0.86-1.76	0.262	0.83	0.51-1.37	0.465
≥ 100.00	1.00											
Alcohol consumption												
Yes	1.47	1.00-2.15	0.042	1.57	1.19-2.06	0.001	1.75	1.16-2.62	0.006	1.32	0.99-1.75	0.052
No	1.00											
Drug use												
Yes	1.95	1.44-2.65	0.000	1.47	1.02-2.18	0.041	2.99	2.07-4.31	0.000	2.54	1.61-3.99	0.000
No	1.00											
Inconsistent condom use												
Yes	1.26	0.82-1.94	0.283	1.22	0.74-2.01	0.443	1.06	0.64-1.74	0.834	0.88	0.49-1.57	0.656
No	1.00											
HIV serological status												
Positive	1.79	1.04-3.08	0.043	1.67	0.79-3.54	0.183	1.82	1.05-3.16	0.036	1.57	0.78-3.13	0.205
Negative	1.00											

95%CI: 95% confidence interval; aOR: adjusted odds ratio; PR: prevalence ratio.

status. More than half had suffered verbal abuse and more than one third physical abuse, both in the setting of their sex work – by clients and police – and in the domestic context, by intimate partners and family members or other known persons. These findings corroborate other studies such as Pando et al. ¹⁶ and Kerrigan et al. ¹¹, reporting that 25.9% of female sex workers in Rio de Janeiro suffered discrimination and 15.8% suffered violence related to sex work in the four months prior to the study.

The current study's results demonstrate the disproportional burden of violence experienced by female sex workers in Brazil. In the general population, according to the *Brazilian National Health Survey 2013* (PNS), the prevalence of any violence against women committed by unknown persons in the previous 12 months was 2.7%; by known individuals (spouse, boyfriend, intimate partner, and other

family) it was 3.1%¹⁷. The prevalence of these events in the current study's population was far higher than among women in the general population – for physical violence alone, prevalence in female sex workers varied from 7.9% for violence committed by the police to 25.2% by intimate partners – clearly demonstrating the increased vulnerability of female sex workers to violence.

This study identified the following factors associated with verbal and physical violence: young age (women less than 30 years old); low income; alcohol and drug use; inconsistent condom use in any situation; and cost per trick BRL 29.00 (USD 9.00) or less. Physical violence was also associated with low schooling and black skin color. These factors have also been identified in other studies as predictors of physical, sexual, and psychological violence against female sex workers¹⁸.

Alcohol and drug use has been identified as one of the most important risk markers of increased violence against female sex workers, in all contexts of the sex trade, since the need to acquire these substances and their shared use with sex partners (intimate partners and clients) condition these women to various situations of exposure to violence and thus also unsafe sex practices, which leads in turn to the association of violence with the risk of HIV infection and other STDs^{19,20,21,22}.

In relation to aggressors, intimate partners (non-paying) were the principal perpetrators of physical aggression against female sex workers in this study, demonstrating the role of these men as perpetrators of violence against women. This highlights the importance of focusing attention on violence against female sex workers beyond that committed by clients. In the multivariate analyses, alcohol and drug use; inconsistent condom use in any situation; and age brackets 18 to 29 and 30 to 39 years were significantly associated with intimate partner violence.

The predictors of violence perpetrated by intimate partners against female sex workers in this study were consistent with the literature in relation to violence against women in general. The higher prevalence rates in younger women with low schooling, low monthly income, and a history of alcohol use have been identified in other studies^{23,24}. The presence of structural factors and alcohol and drug consumption often interweaves in these relations, producing conflicts and further favoring men's control over women, including by violent means. A literature review on the intersection between substance abuse, violence, and HIV/AIDS in women in the United States found that 76% of women that report physical assault and rape in adulthood were victims of their own intimate partners²⁵.

In addition, intimate partner violence is known to be a factor for vulnerability to HIV in female sex workers, especially among younger women, who suffer serious aggressions, and those involved in drugs. It is thus as important as violence committed by clients^{26,27}.

Physical violence by family members was the second most commonly reported type among female sex workers in this study, and the related factors coincide with those associated with intimate partner physical violence (except for alcohol use), which denotes the magnitude of violence against female sex workers in Brazil.

In addition to gender norms and inequalities, factors that reinforce abuse of these women by partners and family members are inherently ambiguous and contradictory: the women are coerced into bringing home money to support other family members, while they are punished for engaging in prostitution, in sexual relations with other men to provide such support.

Wechsberg et al.²⁸ noted that South African female sex workers, especially the younger women and those doing drugs, depend on sex work as their main source of income, including support for other family members. These women reported abuse by men – clients, boyfriends, partners, and family – and great fear of future victimization.

In Brazil, despite the limited number of studies addressing domestic violence against sex workers, descriptive quantitative studies have shown the high burden of violence suffered by female sex workers in their own homes. A study of sex workers in Fortaleza, Ceará State, found that 47.6% of the women were victims of some type of violence at home and that 40.5% experienced abuse in their work environment²⁹.

In the current study, clients were identified as the perpetrators of physical violence by 11.7% of the female sex workers. Multivariate analyses showed an association with age, streetwalking, low cost of tricks, alcohol, and drugs.

Alcohol and drug use stands out among these factors. In the context of sex work, many female sex workers view such use as a means to increase their earnings and interact with clients, simultaneously serving as an escape mechanism from the work itself and the stigma associated with it. However,

alcohol and drug use is identified as an important marker of the violence perpetrated by clients^{30,31}. According to Shannon et al.²⁰, sharing illegal drugs between female sex workers and clients is associated with violence and risky sexual practices: verbal harassment and physical and/or sexual assault (aOR = 2.71; 95%CI: 1.17-6.32; p = 0.021) and risky sexual practices (aOR = 3.17; 95%CI: 1.48-6.77; p < 0.003).

As for the association with streetwalking, many studies have identified the street environment as a factor in the violence committed by clients against female sex workers, in addition to the intrinsic relationship with drug use¹⁴. Although violence against these women also occurs in indoor work spaces, the extent and nature differ and are influenced by a range of risk factors and circumstances of vulnerabilities.

A systematic review of violence against female sex workers in the world⁵ examined the role of the sex work environment in promoting or reducing the risk of violence and found that in India, female sex workers that worked in their own homes were less prone to sexual violence by clients than those who worked in brothels, boarding houses, or public venues; in Great Britain, female sex workers who worked outdoors had six times higher odds of suffering violence from clients than those working indoors; in Canada, female sex workers that met clients in cars or public places were more prone to suffer violence than those working in indoor premises.

In the current study, 7.9% of female sex workers reported physical violence by the police. The multivariate analyses showed that this type of violence was associated with low schooling, streetwalking, and drug use.

These findings agree with the literature. A systematic review⁵ found that 6.6% of female sex workers in India that had suffered violence in the previous year had been raped by the police; in Russia, streetwalking female sex workers were more prone to sexual violence by the police. Police harassment resulting from the criminalization of sex work (arrests, coercion, bribes, raids) were associated with increased physical and sexual violence by clients against female sex workers in Great Britain, Canada, and India.

Police violence against female sex workers is a worldwide phenomenon, regardless of whether sex work is criminalized or legalized. Various studies have associated violence by the police with drug and alcohol use and street prostitution. The convergence of these factors makes women more vulnerable to this type of violence^{32,33}.

In Brazil, a systematic report by the National Network of Prostitutes listed the most common human rights violations experienced by female sex workers, including police violence, consisting of extortion, harassment, eviction from public places, and workplace violations, including excessive fines³⁴. Such reports show that police abuse adds more elements to victimization in the sex trade and further prevents women from denouncing aggression by clients and others.

According to Shannon et al.¹², the elimination of sexual violence in areas with high HIV prevalence in female sex workers would avert 17% of infection in Kenya and 20% in Canada through the immediate and sustained effect of condom use by female sex workers and their clients in the coming decade. Decriminalization of sex work would also positively affect the course of the overall HIV epidemic, avoiding 33-46% of HIV infections in the next decade.

Conclusion

The results presented and discussed here reflect a limited share of the reality experienced by female sex workers in ten Brazilian cities, considering that the analyses were based on responses concerning stigmatized sexual practices and the experience of violence. Such sexual practices are subject to a reporting bias, whereby individuals tend to report what is “socially desirable”³⁵. Meanwhile, the experience of violence is self-perceived. Despite the presence of a researcher to answer questions, there was the possibility of misunderstanding resulting from the subjectivity involved in the perception of violence. A study of female sex workers in Brazil found that they only considered themselves victims of violence if the injuries were serious enough to require hospital treatment³⁶.

In addition, the inherent limitations of cross-sectional studies, especially prevalence bias, may have underestimated the frequency of violence in this group of women. Prevalence estimates may

also be inaccurate because RDS is unable to reach the entire range of female sex workers, especially in cities where the sample number was smaller.

However, this study can contribute to knowledge and understanding of factors associated with the characteristics and perpetrators of violence against female sex workers in Brazil, based on the identification of structural, workplace, and individual factors as probable predictors of various types of abuse against female sex workers, thus corroborating the understanding of the association between experiences of violence and exposure to risk factors for HIV infection in this specific group of women.

The findings denote that violence against female sex workers is increased by the convergence and overlapping of stigmatizing and exclusionary factors that intersect and are intrinsically related to gender and social inequalities, and to sex work itself, which clashes with social norms. Such factors can be macro-structural or individual, such as: poverty, low schooling, and alcohol and drug addiction. The factors identified in this study have been found in other studies as predictors of violence against female sex workers^{12,33,34}. The differences in the magnitude of the factors, the types of violence, and the aggressors can be attributed to the economic, social, cultural, and political contexts as well as the methods used in the various studies.

This evidence of high burden of violence experienced by female sex workers in a wide range of settings shows that these women are victimized by violence in any context and thus more vulnerable to HIV. The evidence thus highlights the need to identify and address the economic and socio-cultural factors and gender inequalities that promote a culture of violence against women worldwide. All these phenomena are multifaceted, with historical, social, and cultural roots that cross class, ethnic, racial, and generational issues and need to be understood in their multiple dimensions in order to deal with the complexity of factors that fuel violence in the various contexts of sex work.

The results provide food for thought on the role of the Brazilian state in citizens' protection, even in unique and controversial contexts, with policies to guarantee fundamental Constitutional rights. The study raises the question of whether female sex workers have their rights guaranteed by a secular state, despite lobbying by segments of society to ban the sex trade.

Contributors

F. S. S. Lima and E. Merchán-Hamann participated in the writing and revision of the manuscript. M. Urdaneta, G. N. Damacena and C. L. Szwarcwald contributed in the data analysis and revision of the manuscript.

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Resumo

No Brasil, há um limitado número de estudos sobre violência contra mulheres profissionais do sexo, tema que vem instigando pesquisadores em todo o mundo, estimulados principalmente por possíveis associações desta com o HIV. Este trabalho objetiva estimar a prevalência de violência contra mulheres profissionais do sexo, segundo natureza e perpetrador, e identificar os fatores associados. Foi realizado um estudo transversal com dados de 2.523 mulheres profissionais do sexo de dez cidades brasileiras, recrutadas pelo método respondent-driven sampling (RDS). Os resultados mostraram que a prevalência de violência verbal foi de 59,5%; violência física 38,1%; sexual 37,8%. Violência física por parceiro íntimo, 25,2%; por clientes, 11,7%. Dentre os fatores associados à violência física estão: idade < 30 anos (ORa = 2,27; IC95%: 1,56-3,29); uso de drogas (ORa = 2,02; IC95%: 1,54-2,65); valor do programa até R\$ 29,00 (ORa = 1,51; IC95%: 1,07-2,13). Conclui-se que as mulheres profissionais do sexo brasileiras vivenciam uma carga desproporcional de violência. Identificar fatores de vulnerabilidade é fundamental para as intervenções que garantam direitos humanos e controle do HIV.

*Profissionais do Sexo; Violência no Trabalho;
Violência Contra a Mulher; HIV*

Resumen

En Brasil, existe un limitado número de estudios sobre violencia contra mujeres profesionales del sexo, tema que ha interesado a investigadores en todo el mundo, estimulados principalmente por posibles asociaciones de ésta con el VIH. Este trabajo tiene como meta estimar la prevalencia de violencia contra mujeres profesionales del sexo, según su naturaleza y agresor, e identificar los factores asociados. Se realizó un estudio transversal con datos de 2.523 mujeres profesionales del sexo de diez ciudades brasileñas, captadas por el método respondent-driven sampling (RDS). Los resultados mostraron que la prevalencia de violencia verbal fue de un 59,5%; violencia física 38,1%; sexual 37,8%. Violencia física por compañero un 25,2%; por clientes un 11,7%. Entre los factores asociados a la violencia física están: edad < 30 años (ORa = 2,27; IC95%: 1,56-3,29); uso de drogas (ORa = 2,02; IC95%: 1,54-2,65); valor del programa de hasta R\$ 29,00 (ORa = 1,51; IC95%: 1,07-2,13). Se concluyó que las mujeres profesionales del sexo brasileñas viven una carga desproporcional de violencia. Identificar factores de vulnerabilidad es fundamental para las intervenciones que garanticen derechos humanos y control del VIH.

*Trabajadores Sexuales; Violencia Laboral;
Violencia contra la Mujer; VIH*

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