

Paid Sex among Men Who Have Sex with Men: A Comparative Analysis in Three Colombian Cities

Pago por relaciones sexuales en hombres que tienen sexo con hombres: análisis comparativo en tres ciudades colombianas

Pagamento por relações sexuais em homens que fazem sexo com homens: uma análise comparativa em três cidades colombianas

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Abstract:

Objective: To analyze the sociodemographic, consumption and personal factors associated with payment for sexual relations in men who have sex with men (MSM) in three cities of Colombia. **Materials and methods:** Cross-sectional study based on sampling led by respondents. A total of 1298 MSM over 18 years of age participated in Medellín, Bogotá and Cali. A univariate and bivariate analysis was performed using the chi-square test or Fisher's test when necessary, accompanied by crude prevalence ratios, and for the final model the Poisson distribution with log link, robust estimator was used, and the adjusted prevalence ratios with their respective 95% confidence intervals were reported. Possible theoretically identified confounding factors were controlled. **Results:** The payment for sex was 13.7% (61) in Medellín, 15.8% (69) in Bogotá and 27.5 % (114) in Cali, and in all three cities, looking for a job, having no education, having no income, consuming illicit substances, having a sexually transmitted infections (STI), living with HIV and being vulnerable to HIV/ AIDS increased the probability of being sex workers. **Conclusions:** Payment for sex is closely associated with structural and personal vulnerability factors, such as unemployment, low educational level, psychoactive substance use, presence of STIs, HIV, and perceived vulnerability to HIV.

Keywords: prejudice, sex work, discrimination, gender identity, use of psychoactive substances, respondent driven sample.

Resumen:

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Objetivo: Analizar los factores sociodemográficos, de consumo y personales asociados al pago por relaciones sexuales en hombres que tienen relaciones sexuales con otros hombres (HSH) en tres ciudades de Colombia. **Materiales y métodos:** Estudio transversal basado en el muestreo dirigido por encuestados. Participaron 1298 HSH mayores de 18 años en Medellín, Bogotá y Cali. Se realizó un análisis univariado y bivariado mediante la prueba de chi-cuadrado (χ^2) o prueba de Fisher cuando fue necesario, acompañado de razones de prevalencia cruda, y para el modelo final se utilizó la distribución de Poisson con enlace log, estimador robusto y se reportaron las razones de prevalencia ajustada con sus respectivos intervalos de confianza al 95 %. Se controlaron posibles factores de confusión identificados teóricamente. **Resultados:** La proporción de pago por relaciones sexuales fue para la ciudad de Medellín fue del 13,7 % (61), para Bogotá del 15,8 % (69) y para Cali del 27,5 % (114); además, para las tres ciudades buscar trabajo, no tener estudios, no tener ingresos, consumir sustancias ilícitas, tener una infección de transmisión sexual, vivir con VIH y tener grado de vulnerabilidad al VIH/sida aumenta la probabilidad de ejercer el trabajo sexual. **Conclusiones:** El pago por relaciones sexuales está estrechamente asociado con factores estructurales y personales de vulnerabilidad, como desempleo, bajo nivel educativo, consumo de sustancias psicoactivas, presencia de infecciones de transmisión sexual, VIH y percepción de vulnerabilidad al VIH. **Palabras clave:** prejuicio, trabajo sexual, discriminación, identidad de género, consumo de sustancias psicoactivas, muestro dirigido por el entrevistado.

Resumo:

Objetivo: Analisar os fatores sociodemográficos, de consumo e pessoais associados ao pagamento por relações sexuais em homens que fazem sexo com homens (HSH) em três cidades da Colômbia. **Materiais e métodos:** Estudo transversal baseado em amostragem liderada por entrevistados. Um total de 1298 HSH com mais de 18 anos participaram em Medellín, Bogotá e Cali. Realizou-se análise univariada e bivariada por meio do teste do qui-quadrado ou teste de Fisher, quando necessário, acompanhado de razões de prevalência brutas, e para o modelo final utilizou-se a distribuição de Poisson com link logarítmico, estimador robusto, e relatadas as razões de prevalência ajustadas com seus respectivos intervalos de confiança de 95 %. Possíveis fatores de confusão teoricamente identificados foram controlados. **Resultados:** O pagamento por relações sexuais foi de 13,7 % (61) para a cidade de Medellín, 15,8 % (69) e Cali 27,5 % (114), além disso para as três cidades, procurar trabalho, não ter escolaridade, não ter renda, consumir substâncias ilícitas, ter infecções sexualmente transmissíveis (IST), viver com HIV e ter um grau de vulnerabilidade ao HIV/AIDS aumenta a probabilidade de ser profissional do sexo. **Conclusões:** O pagamento por relações sexuais está intimamente associado a fatores estruturais e pessoais de vulnerabilidade, como desemprego, baixa escolaridade, consumo de substâncias psicoativas, presença de IST, HIV e percepção de vulnerabilidade ao HIV.

Palavras-chave: preconceito, trabalho sexual, discriminação, identidade de gênero, consumo de substâncias psicoativas, amostragem conduzida por entrevistados.

Introduction

There are groups especially vulnerable to sex work. These include migrants, who may be forced into it in countries where they lack access to jobs; individuals with addictions, who use it to finance substance consumption; and the LGBTIQ+ population, for whom it may become a source of income in contexts of discrimination and labor marginalization (1,6-8).

A study conducted in Europe in 2009 revealed that 6% of sex workers were transgender women and 7% were cisgender men (9). These groups face higher risks of violence and discrimination, reinforcing the need to ensure their access to healthcare services and a discrimination-free environment (10-13).

Within the LGTBIQ+ population, there are subgroups that are difficult to reach, known as hidden populations, which are often characterized by social isolation, mistrust of authorities, and stigma (12). The lack of engagement with these groups limits the understanding of their needs, which is why strategies based on trust-building and the establishment of collaborative relationships with LGBTIQ+ groups are required. This allows for the development of targeted programs and services addressing their unique needs (14).

The prevalence of sex work among men who have sex with men (MSM) varies significantly by region, ranging from less than 1% to more than 30% (10,15,16). Various studies indicate that MSM are more likely to engage in sex work than men who have sex with women (11-13). Among the factors driving them into this practice are economic necessity, labor discrimination, and lack of access to social and healthcare services (17). MSM often face high levels of stigma, which hinders their access to employment and exposes them to

higher risks of sexually transmitted infections (STIs), including HIV. Additionally, sex work may serve as a form of social connection, although it carries significant risks such as violence and exploitation (18).

Despite global advancements, there are still significant gaps in understanding sex work among MSM in Latin America, particularly in Colombia. To date, there are no multicity comparative analyses that simultaneously integrate sociodemographic variables, substance use, and personal histories of MSM engaged in sex work, while also considering three contrasting urban contexts (Bogotá, Medellín, and Cali). This allows for exploration of regional differences and similarities, utilizing a sampling design aimed at hidden populations, such as Respondent-Driven Sampling (RDS), which enhances representativeness and reduces bias associated with conventional recruitment methods. In light of this, the focus of this study was to analyze the sociodemographic, substance use, and personal factors associated with payment for sexual relations among MSM.

Methodology

Design and Context

A cross-sectional study was conducted, nested within the project on sexual behavior and HIV prevalence among MSM in Bogotá, Medellín, and Cali in 2019 (19). A total of 1,298 MSM from three cities in Colombia—Medellín, Bogotá, and Cali—participated.

Population and Sample

All participants were men over the age of 18 who reported having had at least one sexual contact with another man in the past 12 months and who resided in one of the selected cities for the study. A respondent-driven sampling (RDS) method was used, with an initial selection of 9 seeds (3 per city), who then recruited other members of their social network. This data collection technique is the most appropriate for working with groups whose total population is unknown and difficult to access, and for which there is no available sampling frame (20). It is used because it allows for a random selection of participants through the target population's social network and can increase the representativeness of the sample.

Sample Size and Power

The defined sample size was 1,298 participants distributed across Medellín ($n = 446$), Bogotá ($n = 438$), and Cali ($n = 414$). The calculation was based on an expected 15% prevalence of sex work among MSM, with a 95% confidence level, a 3% margin of error, and a design effect ($deff$) of 2. Given the use of RDS, the sample size required under this assumption was at least 1,200 participants. Therefore, the obtained sample ensures a statistical power greater than 80% to detect a 5% difference in proportions between the three cities.

Instrument

An adapted survey was used, based on guidelines for behavioral surveys in populations at risk of HIV, as defined by Family Health International. This was adjusted in Colombia by a group of experts from the funding organization (21). The survey consisted of fourteen sections: 1) social and demographic characteristics, 2) health and access to the General System of Health Social Security, 3) sexual and reproductive history, 4)

stable male partner, 5) occasional partners or casual contacts, 6) sexual relations with women, 7) sex work, 8) payment for sexual relations, 9) knowledge and attitudes towards condoms and lubricants, 10) STIs, 11) knowledge, opinions, and attitudes towards HIV/AIDS, 12) testing, 13) stigma and discrimination, and 14) social networks.

Variables

The outcome variable for this study was payment for sexual relations, defined by the following question: "In the last twelve months, have you received money or an incentive in exchange for sexual relations?" The independent variables were sociodemographic factors: age, household economic level, marital status, household composition, income, occupation, educational level; substance use factors (alcohol, marijuana, cocaine, poppers, ecstasy, and Viagra); and personal factors: HIV testing, HIV status, STIs, degree of vulnerability, condom use, and discrimination.

Data Analysis

Relative and absolute frequency measures were calculated for each of the characteristics analyzed using the RDSAT software. To assess the association between sociodemographic, substance use, and personal factors of the participants with sex work, the chi-square (χ^2) test of independence was used. In cases where expected cell counts were <5, Fisher's exact test was applied. Associations were considered significant if the p-value was <0.05. Prevalence ratios with their corresponding confidence intervals (95% CI) were also estimated. In the multivariate analysis, a model was constructed using the Poisson distribution with a log link and robust estimation. The variables included in the model were those that were significant ($p < 0.05$) in the bivariate analysis for each of the study cities.

Error and Bias Control

To reduce confounding bias, potential confounding variables associated with both the exposure and outcome (age, educational level, and income) were included in the models. Information bias was controlled by standardizing the data collection instrument and training field staff, while selection bias was minimized using the RDS methodology, which weights the probability of each participant's inclusion based on the size of their social network.

Ethical Considerations

This research was approved by the Ethics Committee of the CES University in a session on February 19, 2019. The study followed the requirements of the Scientific, Technical, and Administrative Standards for Health Research, in accordance with Resolution 8430 of October 4, 1993, from the Ministry of Health of Colombia, classified as research with minimal risk (22).

Results

General Characteristics of MSM in the Three Cities

The sample consisted of 1,298 MSM, distributed across Medellín (446), Bogotá (438), and Cali (414). Regarding sociodemographic characteristics, more than 84% of participants in all three study cities lived in households from low-middle socioeconomic strata (0, 1, 2, and 3) and reported living with individuals who were not family members. In the city of Cali, it was found that one in every ten MSM had not attended school, or had only studied up to elementary school (Figure 1).

Regarding the consumption of psychoactive substances, more than 79.6% of participants in all cities reported alcohol consumption, with a higher prevalence in Medellín. Concerning certain illegal substances, such as marijuana, poppers, cocaine, and ecstasy, all showed consumption rates higher than 10%, indicating that at least one in every ten MSM consumes an illegal psychoactive substance. The most commonly used substances were marijuana (36.9%-42.3%) and poppers (18.1%-36.3%). Another notable aspect was the consumption of Viagra, particularly in Bogotá, where it was reported by 12.7% (Figure 1).

In terms of personal characteristics, one in every ten MSM reported having had an STI in the last 12 months (10.6%-19.4%), with a higher prevalence in Bogotá compared to Medellín. Notably, when conducting rapid and confirmatory HIV tests as part of the study, the HIV prevalence was found to be higher than self-reported rates. Over 56% of participants reported not having been tested for HIV in the last 12 months. Similarly, 55.6%-59.1% of the participants reported having some degree of HIV vulnerability across the three study cities.

Regarding discrimination, 2 in every 10 MSM experienced discrimination in the last 12 months (18.5%-23.7%). Finally, concerning sex work, the proportion was found to be 13.7% (61 MSM) in Medellín, 15.8% (69 MSM) in Bogotá, and 27.5% (114 MSM) in Cali (Figure 1).

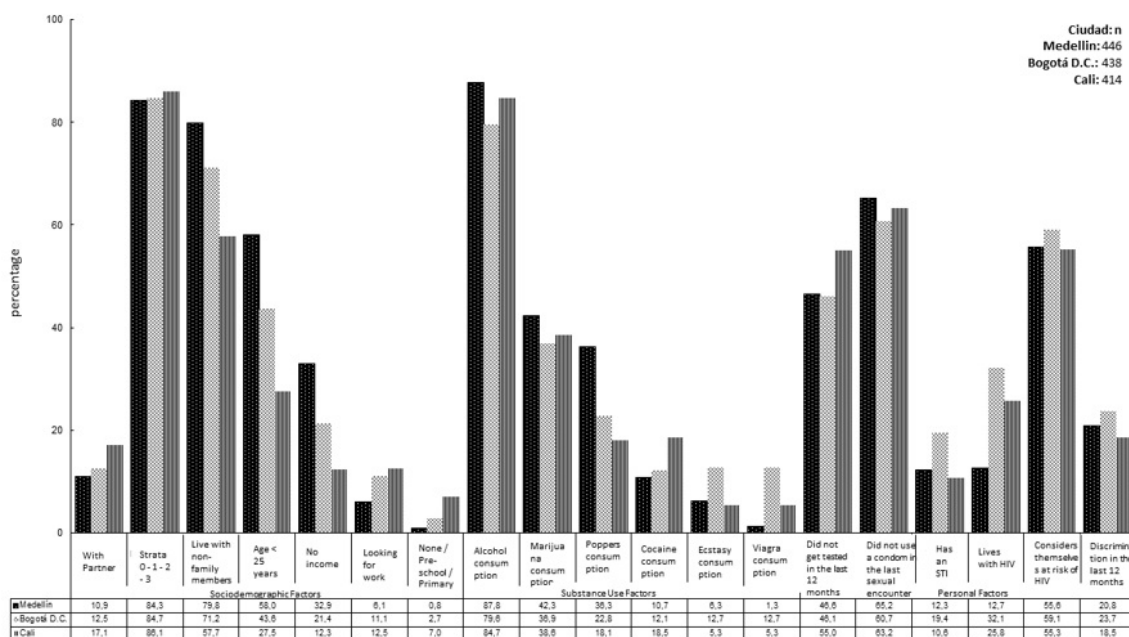


FIGURE 1.

Percentage Distribution of Sociodemographic, Substance Use, and Personal Characteristics of Men Who Have Sex with Men

Sociodemographic Characteristics of MSM Engaged in Sex Work

In Medellín, sex workers were primarily under the age of 24 and belonged to low-middle socioeconomic strata. The majority (95.2%) had completed at least secondary education. About 37.7% had no income, and 67.1% were working at the time of the study. The consumption of poppers (42.6%) and marijuana (55.7%) was high. 21.3% reported a recent STI, and 22.9% were confirmed to be HIV-positive. Discrimination based on sexual orientation was reported by 27.8%.

In the bivariate analysis, significant associations were found between sex work and the following variables: occupation ($p < 0.001$), educational level ($p < 0.001$), marijuana consumption ($p = 0.023$), cocaine consumption ($p = 0.004$), Viagra consumption ($p = 0.009$), STIs ($p = 0.022$), and positive HIV results ($p = 0.010$). For example, seeking employment was associated with a prevalence ratio (PR) of 2.83 (95% CI: 1.64-4.88), while not consuming illicit substances was associated with a PR of 0.44 (95% CI: 0.26-0.76), indicating lower prevalence of sex work among those who do not consume these substances (Table 1).

In Bogotá, MSM were predominantly over 25 years old and from low socioeconomic strata. 92.3% had at least completed secondary education. 13.7% had no income, and 78.2% were employed. The consumption of marijuana (53.6%), cocaine (26%), and alcohol (84%) was frequent. 33.3% reported an STI in the last year, and 49.2% were HIV-positive. 31.8% reported experiencing discrimination. Significant associations were found with educational level ($p = 0.011$), occupation ($p = 0.049$), marijuana consumption ($p = 0.002$), cocaine consumption ($p < 0.001$), STIs ($p < 0.001$), and HIV status ($p < 0.001$). Higher education was associated with a lower likelihood of engaging in sex work (PR = 0.32; 95% CI: 0.15-0.66), while living with HIV was associated with a higher prevalence (PR = 2.08; 95% CI: 1.42-3.04) (Table 1).

In Cali, the majority of sex workers were over 25 years old (85.9%) and from low socioeconomic strata (0-3). 11.4% had no income, 78% were working, and 34.2% consumed cocaine. 29.8% were confirmed to be HIV-positive, and 65% reported high vulnerability to HIV. Significant associations were observed between sex work and the following variables: age ($p < 0.001$), household composition ($p < 0.001$), educational level ($p < 0.001$), marijuana consumption ($p < 0.001$), cocaine consumption ($p < 0.001$), popper use ($p = 0.003$), Viagra consumption ($p = 0.02$), and HIV vulnerability ($p = 0.01$). Being over 25 years old was associated with a PR of 2.32 (95% CI: 1.43-3.77), while not consuming illicit substances was associated with a PR of 0.45 (95% CI: 0.33-0.62), reflecting an inverse relationship between substance use and sex work (Table 1).

It is important to note that in all three cities, seeking employment, not having an education, having no income, consuming illicit substances, having an STI, living with HIV, and being vulnerable to HIV all increased the likelihood of being a sex worker (Table 1).

TABLE 1.
Sexual Work Behavior by Each Study City According to Sociodemographic, Substance Use, and Personal Factors of Men Who Have Sex with Men and Are Sex Workers

Characteristics	Sex Work in Medellín				Sex Work in Bogotá				Sex Work in Cali			
	Yes (n [%])	No (n [%])	P- Value	RPc (IC 95%)	Yes (n [%])	No (n [%])	P- Value	RPc (IC 95%)	Yes (n [%])	No (n [%])	P- Value	RPc (IC 95%)
Age												
<25 years	35 (57,3)	224 (58,1)	0,906	1	26 (37,6)	165 (44,7)	0,279	1	16 (14,0)	98 (32,6)	<0,001*	1
25+ years	26 (42,6)	161 (41,8)		1,02 (0,64-1,64)	43 (62,3)	204 (55,2)		1,27 (0,81-2,00)	98 (85,9)	202 (67,3)		2,32 (1,43-3,77)
Economic Status **												
Strata 0, 1, 2 y 3	50 (81,9)	326 (84,6)	0,589	1	63 (91,3)	308 (83,4)	0,096	1	97 (85,0)	261 (87)	0,611	1
Strata 4, 5 y 6	11 (18,0)	59 (15,3)		1,18 (0,64-2,15)	6 (8,69)	61 (16,5)		0,52 (0,23-1,16)	17 (14,9)	39 (13)		1,12 (0,72-1,72)
Marital Status												
Without a partner	6 (9,83)	43 (11,1)	0,757	1	8 (11,5)	47 (12,7)	0,792	1	22 (19,2)	49 (16,3)	0,474	1
With a partner	55 (90,1)	342 (88,8)		1,13 (0,51-2,48)	61 (88,4)	322 (87,2)		1,09 (0,55-2,16)	92 (80,7)	251 (83,6)		0,86 (0,58-1,27)
Living Situation												
Other family members	44 (72,1)	312 (81,0)	0,272	1	48 (69,5)	264 (71,5)	0,826	1	48 (42,1)	191 (63,6)	<0,001*	1
Partner	9 (14,7)	38 (9,87)		1,54 (0,80-2,96)	6 (8,69)	36 (9,75)		0,92 (0,42-2,03)	18 (15,7)	37 (12,3)		1,62 (1,03-2,56)
Living with children	8 (13,1)	35 (9,09)		1,50 (0,75-2,98)	15 (21,7)	69 (18,6)		1,16 (0,68-1,96)	48 (42,1)	72 (24)		1,99 (1,42-2,78)
Income												
No income	23 (37,7)	124 (32,2)	0,297	1	9 (13,0)	85 (23,0)	0,146	1	13 (11,4)	38 (12,6)	0,008*	1
< Minimum Wage ***	10 (16,3)	98 (25,4)		0,59 (0,29-1,19)	23 (33,3)	121 (32,7)		1,66 (0,80-3,44)	61 (53,5)	111 (37)		1,39 (0,83-2,31)
≥ Minimum Wage	28 (45,9)	163 (42,3)		0,93 (0,56-1,55)	37 (53,6)	163 (44,1)		1,93 (0,97-3,83)	40 (35,0)	151 (50,3)		0,82 (0,47-1,41)
Occupation in the Last 7 Days												
Worked (employed or self-employed)	27 (44,2)	145 (37,6)	<0,001	1	41 (59,4)	167 (45,2)	0,049	1	74 (64,9)	180 (60)	0,284	1
Looking for work	12 (19,6)	15 (3,89)		2,83 (1,64-4,88)	10 (14,4)	39 (10,5)		1,03 (0,55-1,91)	16 (14,0)	36 (12)		1,05 (0,67-1,65)
Study and work	14 (22,9)	157 (40,7)		0,52 (0,28-0,95)	13 (18,8)	116 (31,4)		0,51 (0,28-0,91)	9 (7,89)	45 (15)		0,57 (0,30-1,07)
Other	8 (13,1)	68 (17,6)		0,67 (0,31-1,40)	5 (7,24)	47 (12,7)		0,48 (0,20-1,17)	15 (13,1)	39 (13)		0,95 (0,59-1,52)
Education Level												
No education	3 (4,91)	1 (0,25)	<0,001 f	1	5 (7,24)	7 (1,89)	0,011	1	15 (13,1)	14 (4,66)	<0,001*	1
Basic education	22 (36,0)	88 (22,8)		0,26 (0,13-0,52)	18 (26,0)	68 (18,4)		0,50 (0,22-1,10)	66 (57,8)	136 (45,3)		0,63 (0,42-0,94)
Higher education	36 (59,0)	296 (76,8)		0,14 (0,07-0,27)	46 (66,6)	294 (79,6)		0,32 (0,15-0,66)	33 (28,9)	150 (50)		0,34 (0,21-0,55)
Alcohol Consumption												
Yes	49 (80,3)	343 (89,0)	0,051	1	58 (84,0)	291 (78,8)	0,324	1	98 (85,9)	253 (84,3)	0,679	1
No	12 (19,6)	42 (10,9)		1,77 (1,01-3,12)	11 (15,9)	78 (21,1)		0,74 (0,40-1,35)	16 (14,0)	47 (15,6)		0,90 (0,57-1,43)

Marijuana Consumption											
Yes	34 (55,7)	155 (40,2)	0,023*	1	37 (53,6)	125 (33,8)	0,002*	1	66 (57,8)	94 (31,3)	<0,001*
No	27 (44,2)	230 (59,7)			32 (46,3)	244 (66,1)		0,50 (0,32-0,78)	48 (42,1)	206 (68,6)	0,45 (0,33-0,62)
Cocaine Inhalation											
Yes	13 (21,3)	35 (9,09)	0,004*	1	18 (26,0)	35 (9,48)	<0,001*	1	39 (34,2)	38 (12,6)	<0,001*
No	48 (78,6)	350 (90,9)			51 (73,9)	334 (90,5)		0,39 (0,24-0,61)	75 (65,7)	262 (87,3)	0,43 (0,32-0,59)
Poppers Consumption											
Yes	26 (42,6)	136 (35,3)	0,27	1	22 (31,8)	78 (21,1)	0,05	1	31 (27,1)	44 (14,6)	0,003*
No	35 (57,3)	249 (64,6)			47 (68,1)	291 (78,8)		0,63 (0,40-1,01)	83 (72,8)	256 (85,3)	0,59 (0,42-0,82)
Ecstasy Consumption											
Yes	6 (9,83)	22 (5,71)	0,218	1	10 (14,4)	46 (12,4)	0,643	1	8 (7,01)	14 (4,66)	0,34
No	55 (90,1)	363 (94,2)			59 (85,5)	323 (87,5)		0,86 (0,47-1,58)	106 (92,9)	286 (95,3)	0,74 (0,41-1,32)
Viagra Consumption											
Yes	3 (4,91)	3 (0,77)	0,009	1	6 (8,69)	24 (6,50)	0,508	1	20 (17,5)	29 (9,66)	0,02*
No	58 (95,0)	382 (99,2)			63 (91,3)	345 (93,4)		0,77 (0,36-1,63)	94 (82,4)	271 (90,3)	0,63 (0,43-0,92)
HIV Test in the Last 12 Months											
No	29 (47,5)	179 (46,4)	0,878	1	30 (43,4)	172 (46,6)	0,631	1	69 (60,5)	159 (53)	0,169
Yes	32 (52,4)	206 (53,5)			39 (56,5)	197 (53,3)		1,11 (0,71-1,72)	45 (39,4)	141 (47)	0,79 (0,57-1,10)
Condom Use in Last Sexual Relation											
No Condom Use	40 (65,5)	251 (65,1)	0,953	1	45 (65,2)	221 (59,8)	0,405	1	78 (68,4)	184 (61,3)	0,181
Condom Use	21 (34,4)	134 (34,8)			24 (34,7)	148 (40,1)		0,82 (0,52-1,30)	36 (31,5)	116 (38,6)	0,79 (0,56-1,11)
Has an STI											
Yes	13 (21,3)	42 (10,9)	0,022*	1	23 (33,3)	62 (16,8)	<0,001*	1	17 (14,9)	27 (9)	0,081
No	48 (78,6)	343 (89,0)			46 (66,6)	307 (83,1)		0,48 (0,30-0,74)	97 (85,0)	273 (91)	0,67 (0,45-1,02)
HIV Rapid Test Result											
Reactive	14 (22,9)	43 (11,1)	0,010*	1	34 (49,2)	107 (28,9)	<0,001*	1	34 (29,8)	73 (24,3)	0,254
Non-reactive	47 (77,0)	342 (88,8)			35 (50,7)	262 (71,0)		0,48 (0,31-0,74)	80 (70,1)	227 (75,6)	0,82 (0,58-1,14)
Vulnerability to HIV/AIDS											
Yes	39 (63,9)	206 (54,3)	0,162	1	40 (57,9)	219 (59,3)	0,83	1	74 (65,4)	154 (51,5)	0,01*1
No	22 (36,0)	173 (45,6)			29 (42,0)	150 (40,6)		1,04 (0,67-1,62)	39 (34,5)	145 (48,4)	0,65 (0,46-0,91)
Discrimination in the Last 12 Months											
Yes	17 (27,8)	76 (19,7)	0,146	1	22 (31,8)	82 (22,2)	0,083	1	22 (19,2)	55 (18,3)	0,821
No	44 (72,1)	309 (80,2)			47 (68,1)	287 (77,7)		0,66 (0,42-1,04)	92 (80,7)	245 (81,6)	0,95 (0,64-1,41)

* Variables that are significant are included in the final model if their p-value is less than 0.05 or if their confidence interval does not cross 1.

** Strata 0, 1, 2, and 3: low-middle; strata 4, 5, and 6: high.

*** Legal minimum wage (SMLV) equivalent to USD 335.

**** The p-value was calculated using the chi-square test of independence; Fisher's exact test (f) was used for values <5.

Main Challenges Facing Sex Work

After adjusting for each of the variables that were significant in the bivariate analysis, the following findings were made for each city:

- **Medellín:** Seeking employment (RP_a = 4.61; 95% CI: 1.79-12.08), marijuana consumption (RP_a = 0.49; 95% CI: 0.26-0.92), and a diagnosis of an STI (RP_a = 0.42; 95% CI: 0.19-0.91) were the variables with the highest weight.
- **Bogotá:** Having higher education (RP_a = 0.22; 95% CI: 0.62-0.80) and not consuming cocaine (RP_a = 0.38; 95% CI: 0.18-0.78) were associated with a lower prevalence of sex work.
- **Cali:** Being older than 25 years (RP_a = 3.35; 95% CI: 1.68-6.69), living with a partner (RP_a = 1.91; 95% CI: 1.08-3.38), and having a high perception of vulnerability to HIV (RP_a = 0.55; 95% CI: 0.33-0.92) showed significant associations.

Payment for sexual relations in all three cities was associated with seeking employment, lack of formal education, low income, substance use, the presence of STIs or HIV, and perceived vulnerability to HIV/AIDS (Table 2).

TABLE 2.
Explanatory Model of Sociodemographic, Substance Use, and Personal Factors of
Men Who Have Sex with Men and Are Sex Workers in Three Cities in Colombia.

Characteristics	Medellín		Bogotá DC		Cali	
	P-Value	RPa (IC 95 %)	P-Value	RPa (IC 95 %)	P-Value	RPa (IC 95 %)
Edad						
< 25 years						1
25 + years					0,001	3,35 (1,68-6,69)
Living Situation						
Other family members						1
Partner					0,036	1,91 (1,08-3,38)
Living only with children					0,086	1,92 (0,92-4,02)
Income						
No income						
<SMLV					0,99	1,003 (0,44-2,26)
≥SMLV					0,058	0,43 (0,18-1,030)
Occupation in the Last 7 Days						
Worked (Employed or Self-employed)		1		1		
Looking for Work	0,002	4,61 (1,79-12,08)	0,781	0,88 (0,38-2,06)		
Study and Work	0,103	0,54 (0,25-1,13)	0,267	0,66 (0,32-1,36)		
Other	0,396	0,67 (0,27-1,66)	0,04	0,33 (0,12-0,95)		
Education Level						
No Education		1		1		1
Basic Education	0,329	0,29 (0,025-3,44)	0,076	0,29 (0,075-1,13)	0,421	0,69 (0,28-1,69)
Higher Education	0,126	0,15 (0,014-1,69)	0,022	0,22 (0,62-0,80)	0,046	0,38 (0,14-0,98)
Alcohol Consumption						
Yes						
No	0,025	2,48 (1,12-5,52)				
Marijuana Consumption						
Yes				1		1
No	0,028	0,49 (0,26-0,92)	0,074	0,58 (0,32-1,05)	0,015	0,47 (0,26-0,86)
Cocaine Inhalation						
Yes						
No	0,186	0,57 (0,24-1,32)	0,009	0,38 (0,18-0,78)	0,22	0,63 (0,31-1,28)
Poppers Consumption						
Yes						1
No					0,044	0,49 (0,24-0,98)
Viagra Consumption						
Yes		1				1
No	0,183	0,27 (0,04-1,85)			0,891	1,055 (0,33-2,25)
Has an STI						
Yes		1		1		
No	0,03	0,42 (0,19-0,91)	0,02	0,48 (0,26-0,89)		
HIV Rapid Test Result						
Reactive						
Non-reactive	0,433	0,72 (0,32-1,64)	0,015	0,48 (0,27-0,87)		
Vulnerability to HIV/AIDS						
Yes						1
No					0,024	0,55 (0,33-0,92)

* The variables included in the model were those that were significant in the bivariate analysis, with a p-value less than 0.05 or whose confidence interval did not include 1.

Discussion

This study identifies that the factors associated with payment for sexual relations in all three cities were, in general, seeking employment, lack of education, lack of income, illicit substance use, presence of an STI, living with HIV, and having a degree of vulnerability to HIV. These factors were found to increase the likelihood of receiving money in exchange for sexual relations.

Similarly, the study found an overall proportion of sex work ranging from 13.7% to 27.5%. These values are similar to those found in China in 2018 (7.5%), Thailand in 2014 (15%) (23), India in 2017 (20%), South Africa in 2016 (25%), Canada in 2014 (13.6%), the United States in 2015 (11.5%) (24), Mexico in 2017

(9.8%) (25), Peru in 2012 (17.4%), and Brazil in 2015 (21.5%) (26). It is important to note that all the studies mentioned used the same methodology. Additionally, it should be understood that sex work is not an isolated or marginal phenomenon but rather a common and transversal reality across diverse cultures and contexts.

Moreover, several studies have found that MSM who engage in sex work face a higher risk of HIV and other STIs due to the nature of their work and the increased frequency of sexual contacts. In this study, HIV prevalence among MSM ranged from 33.3% to 50%. While this is expected, it is concerning that this is one of the highest reported prevalences when compared to other studies, such as the one conducted in the United States in 2017 (14.7%) (27), in Mexico in 2017 (18.5% on average) (28), in Thailand in 2016 (21.7%) (29), in Brazil in 2015 (13.2%) (30), in Peru in 2014 (24.5%) (31), and in the Dominican Republic in 2012 (14.3%) (32). Studies have also found a high prevalence of substance use among MSM sex workers, including alcohol, tobacco, marijuana, cocaine, methamphetamine, and designer drugs. This finding is consistent with recent research in Latin America (17,33).

Stigma and discrimination are factors that may contribute to the prevalence of sex work among MSM, particularly in countries where homosexuality is illegal or socially stigmatized. These factors also limit access to employment and healthcare services, influencing MSM's decision to resort to sex work as a means of livelihood. A study conducted in Peru in 2012 found that MSM who had exchanged sex for money or goods in the past year reported more lack of access to healthcare, less social support, and higher levels of violence compared to MSM who did not engage in sex work (34).

A study conducted in Brazil in 2015 found that MSM who had exchanged sex for money or goods in the last year were more likely to report a lack of formal education, lack of employment, and increased experience of violence compared to MSM who did not report engaging in sex work (34). While this study shows that discrimination tends to increase sex work, no statistical differences were found to confirm this situation. However, the results found should not be disregarded. Efforts must continue to reduce discrimination, emphasizing access to healthcare services, reducing substance use, and raising awareness and education for families, communities, and governmental entities.

Conclusion

This study reveals that multiple factors, such as lack of employment, education, income, and illicit substance use, are associated with MSM's participation in sex work in three Colombian cities. The prevalence of sex work among MSM is comparable to that of other countries, and the high prevalence of HIV, ranging from 33.3% to 50%, is particularly concerning and higher than reported in other international studies. This cannot be understood solely from an individual or moral perspective, but rather as the result of specific social and economic contexts that require comprehensive, differentiated interventions centered on the social determinants of health.

Stigma and discrimination continue to be significant barriers that exacerbate the vulnerability of MSM engaged in sex work. Although no statistical differences were found to confirm a direct relationship between discrimination and sex work, the evidence suggests that continued efforts are necessary to reduce these barriers. It is recommended to prioritize access to healthcare services, reduce substance use, and promote awareness and education within families, communities, and governmental entities to provide comprehensive support to this population.

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Notes

Conflict of Interest All authors declare that they have no conflicts of interest.

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