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Factors associated with condom use negotiation by female sex workers in Bangladesh

Nazmul Alam^{1,4,5}, Mahbub Elahi Chowdhury², Malay K. Mridha¹, Anisuddin Ahmed¹, Laura J. Reichenbach¹, Peter Kim Streatfield³, and Tasnim Azim⁴

¹Centre for Reproductive Health, International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), Dhaka, Bangladesh

²Centre for Equity and Health Systems, International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), Dhaka, Bangladesh

³Centre for Population, Urbanization and Climate Change, International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), Dhaka, Bangladesh

⁴Centre for HIV and AIDS, International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), Dhaka, Bangladesh

⁵Unité de santé internationale, Université de Montréal/CRCHUM, Montréal, Canada

Summary

Negotiation for condom use by female sex workers (FSWs) with their male clients can enhance condom use. A cross-sectional study was conducted among 1395 FSWs; 439 from two brothels, 442 from 30 hotels, and 514 from streets of two cities in Bangladesh to determine the predictors of condom use negotiation. Consistent condom use rates in the seven days prior to interview were reported to be 16.2%, 21.7%, and 4.5% among the brothel, hotel, and street based FSWs respectively. Overall, 28.1% of FSWs negotiated for condom use with their clients. Participation in behaviour change communication (BCC) programmes (AOR, 1.5; 95% CI, 1.2–2.0), and self-perceived risk of HIV infection (AOR, 1.8 95% CI, 1.6–2.1) were positive predictors for condom negotiation. Compared to the hotel based FSWs, street (AOR, 0.6; 95% CI, 0.4–0.9), and brothel based FSWs (AOR, 0.7; 95% CI, 0.5–0.9) were less likely to negotiate for condom use. FSWs in Bangladesh are at high risk for STI/HIV infection because of low overall negotiation for condom use. Participation in BCC programmes had positive effect on condom negotiation by FSWs, and should be strengthened in commercial sex venues.

Keywords

Condom use negotiation; Female sex workers; Bangladesh

Introduction

Female sex workers (FSWs) are vulnerable to human immunodeficiency virus (HIV) infection and sexually transmitted infections (STIs) because of frequent unprotected sex acts with multiple partners^{1–3}. Commercial sex takes different forms in South and Southeast Asian countries based on the venues where FSWs entertain their clients such as in brothels,

Corresponding author: Nazmul Alam, Associate Scientist, Centre for Reproductive Health and Centre for HIV and AIDS, icddr, Mohakhali, Dhaka 1212, Bangladesh, Phone: 880 2 8860523-32/2256, nazmul@icdrb.org.

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hotels, rented apartments, streets, bars, and beauty salons^{4, 5}. Similarly, in Bangladesh, FSWs are broadly categorized as street based, brothel based, hotel/residence based although it has been well documented that FSWs often exchange their venues^{6, 7}. In Bangladesh, prevalence of HIV among FSWs is still below 1%, but risk behaviours such as low condom use, high client turn over, and high rates of other STIs make them vulnerable to HIV^{7, 8}. National serological surveillance and other special studies among FSWs confirm high prevalence of STIs among FSWs in Bangladesh ranging from 8% to 64% for syphilis, gonorrhea, chlamydia, and herpes simplex virus 2 (HSV2)^{9, 10}. According to the latest round of Bangladesh Behavioural Surveillance Survey (2006–07), 13% and 28% of the brothel and hotel based FSWs used condom consistently with their regular clients respectively^{7, 11, 12}.

Globally an accepted strategy to enhance condom use in commercial sex is to improve the skills of FSWs in condom use negotiation with their male clients. Condom use self-efficacy and confidence in negotiation with clients have been found to enhance consistent condom use among FSWs^{7, 13, 14}. Initiation of condom use by FSWs themselves and improving their ability to refuse clients who do not want to use condoms are critical steps for condom use negotiation. On the other hand, condom use negotiation by FSWs is negatively influenced by a range of factors including poverty, inequitable power structures in the commercial sex settings, restrictive laws, gender dynamics, and other socio-cultural factors¹³. Harassment and violence faced by FSWs from clients, law enforcement agencies, and power structures is a key factor that deters condom use negotiation^{7, 15}. Law enforcement personnel often consider possession of condoms to be grounds for arrest and harassment of FSWs; this diminishes the likelihood of FSWs to carry condoms, a necessary step towards successful condom negotiation^{16, 17}.

In Bangladesh several studies have highlighted the factors associated with condom use in commercial sex. Qualitative studies describe various issues related to cultural beliefs and norms as well as pleasure¹⁸. Secondary analysis of existing data have shown that facilitating factors for condom use among clients of FSWs include requesting clients to use condoms, availability of condoms, better knowledge on HIV prevention while deterring factors include multiple sex partners and forced sex⁷. However, none of these studies have investigated condom negotiation directly as they did not document the extent to which FSWs negotiate for condom use with their partners or the factors that determine condom use negotiation. This study addresses this gap as it measures the level of condom use negotiation by hotel, street and brothel based FSWs in Bangladesh and identifies the factors that influence condom use negotiation. The results can help to guide HIV prevention interventions in order to increase condom use by FSWs.

Methodology

This study is part of a cross-sectional study that was conducted in 2006 among FSWs from selected brothels, hotels and streets in Bangladesh and their clients to understand barriers of condom use in commercial sex settings. Street and hotel based FSWs were recruited in this study from Dhaka and Chittagong city corporation area, the two major cities in Bangladesh. Brothel based FSWs were recruited from Daulatdia and Tangail, the two largest brothels in Bangladesh. The study subjects were selected using multi-stage sampling technique for brothels, hotels and streets as appropriate.

For brothels a mapping exercise was done to enumerate the number of rooms and number of FSWs in each room. Each brothel in the two areas was divided into segments of 30 rooms resulting in 27 segments in Tangail and 23 in Daulotdia. Fifteen segments were randomly selected from Tangail and Dauladia. There were 40 FSWs per segment on an average; fifteen from each segment were randomly selected for recruitment in the study. For street

based FSWs 81 cruising spots where at least five FSWs gathered per day on an average of three consecutive days were identified with 54 in Dhaka and 27 in Chittagong metropolitan city. From this list, 30 cruising spots were selected by simple random sampling method and FSWs were recruited in each selected cruising spot using probability proportional to size (PPS) method. For identification of hotel based sex workers, residential hotels in Dhaka and Chittagong city corporation area were listed if they had at least five FSWs available every day for the last seven days. From the list of 74 such hotels in Dhaka and seven in Chittagong, 30 hotels were selected by simple random sampling method and FSWs were randomly sampled and recruited in each selected hotel using PPS method. Sample size was calculated separately for each of the different types of FSWs using the variable 'major reasons for not using condoms in last sex'. The sample sizes were calculated to be 487, 520, and 487 for brothel based, hotel and street based FSWs respectively.

Data collection was done by trained female interviewers using a structured questionnaire adapted for the three types of FSWs. The questionnaire was pilot tested and translated in local language for final administration. In addition to asking questions on socio-demographic characteristics, STI/HIV knowledge, and sexual behaviour, information on condom use for different types of sexual acts (e.g. vaginal, anal, oral) with both new and regular clients were collected. The study was approved by the Ethical Review Committee and Research Review Committee of the International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b).

Data were entered in Fox-pro database system (Microsoft Visual FoxPro 6.0, Microsoft Press Redmond, Wash. Microsoft Press, ©1998); any discrepancies were resolved by checking the hard copy questionnaire. Comparisons were made for socio-demographic, sexual behaviour and condom use related information among the three types of FSWs. To examine crude associations, Chi-squared test was used for categorical data and Students' t-test was used for continuous variables. We used two variables to define 'condom negotiation': i) whether a FSW herself initiated dialogue and her client agreed to use a condom in last sex act; and ii) whether a FSW refused any client in last six months of interview for not being willing to use condoms. We categorized 'condom negotiation' as 'no', 'partial', and 'full'. '*No condom negotiation*' was determined if FSWs neither initiated condom use nor refused any clients in the previous six months for not using condoms., '*Partial condom negotiation*' was determined if FSWs reported 'Yes' to either of the two questions, and '*full condom negotiation*' was determined if FSWs reported 'Yes' to both questions. In order to accommodate the ordinal nature of the computed outcome variable, we used bivariate and multivariate cumulative logit model to evaluate the factors associated with condom negotiation. In the multivariate model, we included the variables with p value 0.1 in bivariate regression model. P value 0.05 was considered as statistically significant for all two sided test. We checked the test of parallel lines to assess the proportional odds assumption of ordinal regression model. We used SPSS (version 15.0, SPSS, Inc., Chicago, Illinois) for all statistical analyses.

Results

Of the total 1418 FSWs approached, 1395 completed the interview after providing verbal informed consent; 439, 442, and 514 FSWs from brothel, hotel and street settings respectively. Data collection could not be completed for 23 FSWs because they were unwilling to respond to some of the questions, or they had clients arrive at that time and were not available afterwards.

Table 1 shows the background characteristics of FSWs from all three sites. Among the FSWs, 66.7% were aged 24 years or less, this group included 261 (18.7%) FSWs from less

than 18 years of age (13 years to 17 years). Nearly half of the FSWs were illiterate, except for the hotel based FSWs, where only 26.9% were illiterate. Hotel based FSWs earned significantly more compared to the street and brothel based FSWs. Compared to all other groups, more hotel based FSWs were married (61.6%) and the average age at first sex was similar for all groups (14.7 years). The mean duration of the FSWs in this profession was 4.5 years, and this was lowest for those in the streets (2.9 years), although the difference was not significant. FSWs had overall good to moderate knowledge regarding HIV/STI prevention and transmission (over 80%). Of all FSWs, 82.1% attended NGO programs in the last six months of interviews. Significantly higher proportion of the street based FSWs experienced violence, either sexual or physical (rape, kicking, slapping, etc.), compared to the hotel based FSWs (53.1% vs. 14.0% respectively) during the six months prior to interview. Taking illicit substances (including alcohol) were reported more by brothel based FSWs (35.5%) compared to hotel based FSWs (14.5%) and street based FSWs (24.7%).

As shown in Table 2, high risk sexual behaviours for HIV/STI transmission were common among all three types of FSWs. On an average, one FSW entertained 25 clients per week with the highest numbers reported by hotel based FSWs who had an average of 36 clients per week. Overall, consistent condom use rate during vaginal or anal sex with any client seven days prior to interview was low; 13.6% with new clients, 13.3% with regular clients, and 4.3% with regular non-commercial partners such as lovers and pimps. Condom use at last sex for all type of FSWs was 58.9%, which was again lowest among street based FSWs (41.4%). Nearly 90% of the FSWs reported that condoms were easily available and the majority (59.1%) said that NGO workers were the major source of condoms. Approximately half of the FSWs believed that her own decision was important for using condoms, while another one-quarter thought that clients' decision was important. All three types of FSWs reported that client's objection (56.1%) was the major reason for not using a condom during last sex, followed by condom unavailability (18.2%), having a trusted partner (15.6%), and delay in ejaculation (15.0%) (Table 2). Higher proportion of brothel based FSWs reported trusting their partners (36.8%) as a reason for not using condoms during last sex compared to hotel based FSWs (12.9%) and street based FSWs (5.6%). Condom unavailability was reported more commonly by street based FSWs (20.1%).

Of all FSWs, 28.1% had 'full negotiation' and another 35.2% had 'partial negotiation' (Figure 1). Fewer street based FSWs reported full negotiation for condom use (22.1%) compared to hotel (36.9%) and brothel (26.1%) based FSWs. Figure 2 shows that 28.0% FSWs of age below 18 years had 'full negotiation' condoms compared to 30.3% of age 18 years – 24 years and 24.7% of age above 25 years but this difference was not statistically significant. In bivariate cumulative logit models, negotiation for condom use was significantly associated with literacy, income, type of FSW, knowledge about HIV/AIDS, participation in NGO operated education sessions, past experience of harassment and HIV risk perception. In the multivariate model, negotiation for condom use was significantly associated with type of FSW, knowledge about HIV/AIDS, participation in NGO led behaviour change communication (BCC) programs, and risk perception for HIV/AIDS (Table 3). Street based FSWs (OR 0.6, 95% CI 0.4–0.9), brothel based FSWs (OR 0.7, 95% CI 0.5–0.9), and FSW with poor knowledge of HIV/AIDS (OR 0.4, 95% CI 0.2–0.6) were significantly less likely to negotiate for condom use compared to the hotel based FSWs. On the other hand, FSWs who reported participation in any NGO led BCC programs (OR 1.5, 95% CI 1.2–2.0), and those who reported considering themselves to be at risk for HIV infection (OR 1.8, 95% CI 1.6–2.1) were significantly more likely to negotiate for condom use with their clients.

Discussion

This study highlights that negotiating for condom use was low among all the FSWs, while street based FSWs were less likely to negotiate for condoms compared to hotel and brothel based FSWs. The study also shows that participation in NGO led BCC programs helped the FSWs to negotiate better for condom use with their clients.

The current didactic approach to encouraging condom use is unlikely to enhance FSWs ability to negotiate with clients because negotiation of condom use is influenced by a range of factors including economic vulnerability of FSWs, their negotiation skills, gender and power relations^{19, 20}. Some of these factors may be improved by involving FSWs in intervention programs that provide them more knowledge about STI/HIV/AIDS and better skills to negotiate for condoms with their clients^{21, 22}. However, for others factors, such as underlying gender and power related issues, interventions need to take into account the societal and contextual reality that determines the vulnerability of FSWs^{18, 19}. This study showed that client's objection was the leading reason for not using condoms and was reported consistently across the three different groups of FSWs. The clients who are not willing to use condoms often offer more money for not using a condom or become violent towards the FSWs. Earlier studies have shown that the client's objection to condom use is often related to the perceived belief that condoms reduce sexual pleasure or sometimes it is grounded in deeper issues related to gender and ideas about masculinity^{18, 23}. Thus, rather than focusing solely on FSWs' individual knowledge and attributes, it is important to contextualize safer sex promotion efforts within FSWs' ground reality.

It is important for interventions to recognize the differences in negotiation ability and practice across the different types of FSWs. Street based FSWs were less likely to negotiate for condom use with their clients compared to other types of FSWs, which may be correlated with their lower income, lower literacy, less knowledge about STI/HIV/AIDS and the fact that street based FSWs are more exposed to violence in their workplace compared to other types of FSWs. Providing skills for alternative income generation is a recognized intervention for sex workers to improve their status and negotiation for safer sex^{24, 25}. In Bangladesh, many programs offer alternate income generation activities but few of them have demonstrated the desired outcomes. One challenge for these programs is that the earnings from alternative sources, especially for younger FSWs, are much lower than from selling sex. Well-designed prospective studies with realistic alternatives of livelihood options should be introduced, along with strong evaluation components to demonstrate the role of alternative income generation on improving FSW's status in Bangladesh. To increase condom use negotiation, sex workers also need the support of the power structure in which they operate.

This study underscores that participation in NGO run BCC programs helped the FSWs to negotiate better for condom use with their clients. NGO run BCC programs contribute to increasing knowledge on HIV/STI transmission and prevention, learning negotiation skills, and gaining confidence that condom use is a socially deserving behaviour²⁶. NGOs and community based organizations (CBOs) also help FSWs to organize themselves by forming self-help groups as a means of empowering them to negotiate for condom use with their clients²⁷ and also facilitate FSWs to share their feelings, thoughts, and experiences regarding condom use with fellow FSWs. Most of the NGO run interventions in Bangladesh work with group counseling sessions to increase knowledge and awareness about STI/HIV infection and prevention, improving skills on condom use and more importantly, improving distribution and availability of condoms at sex work venues to promote condom use and negotiation by the FSWs.

FSWs of age between 13 years and 17 years were recruited in this study to understand sexual risk behaviours and other vulnerabilities in this group as with the older FSWs. In several studies in Asia reported that teenaged FSWs pose high level of risky behavior in terms of STIs and inconsistent condom use^{29,30}. Initially the ethical review committee of icddr,b expressed a strong preference to limit the age group of study participants to 18 years and above. However, after discussion the ERC was convinced that in employing this inclusion criterion, we would miss the large number of FSWs who are below the age of 18 years. The ERC also agreed that collection of information on risk behaviors among these FSWs would have important programmatic implications. The option of taking parental assent was dropped considering that the parents may be ignorant of those FSWs involvement in selling sex. We did not however, find any significant difference in condom use negotiation in FSWs in this group compared to the older groups unlike the study conducted among the study reported from Philippines and Thailand^{29,30}.

Several limitations of the study should be taken into account. First, self-reported information collected from FSWs in this cross-sectional survey may suffer from social desirability bias to report favorably for condom negotiation and that we did not collect any biological data to report STI/HIV status to correlate with condom negotiation practices. Second, the study was conducted in two selected brothels and two major cities in Bangladesh for street based and hotel based FSWs thus the findings may not be generalizable. However, we recruited FSWs randomly within their categories, thus improving the potential to generalize the findings to other FSWs in Bangladesh. Third, our condom negotiation outcome relied on two indicators, whether FSW initiated condom use herself during last sex and whether a FSW refused any client for not being willing to use condoms in the last six months. While these two indicators are most vital, other elements of condom use negotiation, including steps taken to resist client's pressure not to use condoms and possession of condoms, may have better explained condom use negotiation as used in another study to define condom negotiation²⁸.

Based on the findings from this study, we conclude that FSWs in Bangladesh are at higher risk for STI/HIV because of low consistent condom use and over all low negotiation for condom use. As expected, low income FSWs including those who are street based, are less likely to negotiate with their clients for condom use. Exposure to behaviour change intervention had a positive impact on FSWs to better negotiate for condom use with their clients. We recommend that behaviour change interventions with particular focus on improving condom use negotiation skills should be strengthened to cover all types of FSWs, especially street based FSWs.

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Figure 1.
Condom use negotiation by types of female sex workers

Figure 2.
Condom use negotiation by age of female sex workers

Table 1
Socio-demographic and other characteristics by three different types of sex worker

Characteristics	Brothel Sex Workers n=439	Hotel Sex Workers n=514	Street Sex Workers n=442	Total n=1395	P value
Age (%)					0.0001
24 years	63.3	53.9	84.8	66.7	
25 years	36.7	46.1	15.2	33.3	
Education (%)					0.0001
No formal education	54.4	26.9	65.0	49.6	
1–5 years education	34.4	33.5	25.7	30.9	
6 and above years education	11.2	39.6	9.3	19.5	
Daily income (%)					0.0001
Tk.500	79.5	18.1	99.2	67.3	
>Tk.501 and above	20.5	81.9	0.8	32.7	
Marital status (%)					0.0001
Never married	54.4	18.3	49.1	39.4	
Divorced/separated	33.7	20.1	36.6	30.5	
Currently married	11.9	61.6	14.3	30.1	
Duration as FSW, median-yrs. range	5.0 (0–35.1)	1.0(0–19.4)	4.5 (0–32.1)	2.9 (0–35.4)	NS
Age at 1 st sexual intercourse, mean-yrs (SD)	14.7 (2.3)	14.2 (2.5)	15.2 (2.3)	14.7 (2.4)	NS
Knowledge about HIV/STI* (%)					<0.0001
Poor Knowledge	4.6	10.0	18.3	11.3	
Moderate Knowledge	41.0	57.6	49.0	49.2	
Good Knowledge	54.4	32.3	32.7	39.5	
Participated in NGO run prevention programs in last 6 months (%)	90.7	69.3	88.5	82.1	NS
Abortion in last year	17.5	11.7	17.4	15.3	NS
Experienced violence** in past 6 month (%)	26.9	14.0	53.1	32.5	0.005

Characteristics	Brothel Sex Workers n=439	Hotel Sex Workers n=514	Street Sex Workers n=442	Total n=1395	P value
Used any illicit substances*** in past 6 month (%)	35.3	14.5	24.7	24.8	0.0001

* Knowledge is based on five key questions including, knowledge about HIV transmission, HIV , prevention, and symptoms of common STIs other than HIV .

** Violence included physical beating, rape, not paying money after having sex,

*** Illicit substances including alcohol and cannabis.

Table 2

Sexual and condom use behaviors by three different types of sex worker

Characteristics	Brothel Sex Workers n=439	Hotel Sex Workers n=514	Street Sex Workers n=442	Total n=1395	P value
Number of client in past week (mean, range)	24 (0-84)	36 (0-216)	16 (0-105)	25 (0-216)	NS
Used condom in last sex (%)	64.7	73.5	41.4	58.9	0.0001
Sex worker initiated condom use in last sex (%)	46.9	52.3	30.7	42.7	NS
Refused any clients for not willing to use condoms in last six month (%)	44.5	60.0	45.7	48.6	0.0001
Type of last client (%)					
New	47.6	79.4	64.0	63.7	0.0001
Regular	52.4	20.6	36.0	36.3	
Consistently used condom in last week (%)					0.0001
New clients	16.2	21.7	4.5	13.6	
Regular clients	18.9	18.6	3.9	13.3	
Regular non-commercial partners	6.3	1.6	3.2	4.3	
Currently having any STI symptoms (%)					0.03
Yes	13.2	18.6	18.9	17.0	
No	86.2	81.4	81.1	83.0	
Whose decision is important for condom use (%)					0.004
Female sex workers	52.2	45.3	53.6	50.2	
Partners	28.2	22.6	26.5	25.6	
Both	19.6	11.8	19.9	24.3	
Where to get the condoms (%)					0.0001
NGO worker	71.5	65.6	39.4	59.1	
Medicine seller	15.5	58.4	48.4	41.7	
Other shopkeepers	80.0	38.7	9.0	42.3	
Partner	36.4	10.7	15.6	20.4	
Hotel authority	-	89.1	-	28.7	

Characteristics	Brothel Sex Workers n=439	Hotel Sex Workers n=514	Street Sex Workers n=442	Total n=1395	P value
Sardarni (pimp, only for brothels)	6.2	-	-	1.9	
Reasons for not using condoms in last sex* (%)					0.0001
Delay in ejaculation	5.8	5.2	23.6	15.0	
Client objected	45.2	62.9	59.1	56.1	
Condom was not available	5.2	4.3	20.1	18.2	
Trusted partner	36.8	12.9	5.6	15.6	
Don't know proper use	5.2	2.6	7.3	5.8	
Others	5.8	9.3	6.0	6.9	
Perceived herself at risk of HIV infection (%)					0.006
Yes	46.7	41.0	51.4	46.6	
No	53.3	59.0	48.6	53.4	

* Multiple responses accepted, NS: not statistically significant.

** Measured through a question asked if FSWs are considered themselves at risk of HIV

Table 3

Multivariate ordinal logistic regression analysis to understand determinants of condom negotiation among sex workers in Bangladesh

Covariates	Unadjusted OR* (95% CI)	Adjusted OR (95% CI)
Age		
24 years	1.3 (1.0 – 1.6)	1.1 (0.9 – 1.6)
25 years (ref)	1	1
Education:		
No formal education	0.6 (0.4 – 0.8) **	1.0 (0.7 – 1.4)
1–5 years education	0.7 (0.5 – 0.9) **	0.9 (0.7 – 1.3)
6 years and above education (ref)	1	1
Daily income		
Tk.500	0.5 (0.4 – 0.7) **	0.8 (0.5–1.2)
Tk.501 and above (ref)	1	1
Type of FSW		
Brothel	0.6 (0.4 – 0.8) **	0.7 (0.5 – 0.9) **
Street	0.4 (0.3 – 0.6) **	0.6 (0.4 – 0.9) **
Hotel (ref)	1	1
Type of last client		
New	1.3 (0.9 – 1.4)	1.0 (0.8 – 1.3)
Regular (ref)	1	1
Knowledge about HIV/STI* (%)		
Poor Knowledge	0.4 (0.3 – 0.6) **	0.4 (0.2–0.6) **
Moderate Knowledge	0.9 (0.7 – 1.2)	0.9 (0.7 – 1.2)
Good Knowledge	1	1
Currently having any STI symptoms		
Yes	1.1 (0.8 – 1.3)	1.1 (0.9 – 1.5)
No (ref)	1	1
Participated in NGO programs in last 6 month		
Yes	2.3 (1.6 – 3.3) **	1.5 (1.2 – 2.0) **
No (ref)	1	1
Experienced violence in last six month		
Yes	0.7 (0.5–0.9) **	0.9 (0.7–1.2)
No (ref)	1	1
Self perception of HIV risk		
Yes	1.7 (1.4–2.2) **	1.8 (1.6–2.1) **

Covariates	Unadjusted OR* (95% CI)	Adjusted OR (95% CI)
No (ref)	1	1

* Condom negotiation is defined if sex workers initiated condom use in last sex and/or refused any client in last six months for not using condom.
OR=Odds Ratio, CI=Confidence Interval

**
p<0.05