Published in final edited form as:

Int J Gynaecol Obstet. 2011 August ; 114(2): 101–105. doi:10.1016/j.ijgo.2011.03.005.

History of sex trafficking, recent experiences of violence, and HIV vulnerability among female sex workers in coastal Andhra Pradesh, India

Jhumka Gupta^{a,*}, Elizabeth Reed^b, Trace Kershaw^a, and Kim M. Blankenship^c

^a Yale School of Public Health and Center for Interdisciplinary Research on AIDS, New Haven, USA

^b George Washington University, Washington, USA

^c American University, Washington, USA

Synopsis

Findings from female sex workers in southern India indicate that women who enter sex work via trafficking are exposed to unique HIV vulnerabilities.

Objectives—To estimate the prevalence of sex trafficking as a mode of entry into sex work, and to examine associations between sex trafficking and recent violence experiences and HIV vulnerability among female sex workers (FSWs).

Methods—In a cross-sectional study in 2006 in coastal Andhra Pradesh, India, 812 FSWs were recruited via respondent-driven sampling to take part in an oral survey of their experiences in sex work.

Results—One in 5 (19.3%) FSWs met the UN definition of sex trafficking. Women trafficked into sex work were more likely than other FSWs to report recent violence experiences (adjusted odds ratio [AOR], 1.93; 95% confidence interval [CI], 1.32–2.81), more clients per week (AOR, 1.63; 95% CI, 1.11–2.41), and more days of sex work per week (AOR, 1.76; 95% CI, 1.18–2.63), and were less likely to report use of FSW-focused services (AOR, 0.60; 95% CI, 0.42–0.86). No significant differences emerged regarding HIV knowledge or consistent condom use.

Conclusion—There was a high prevalence of sex trafficking. A history of sex trafficking was associated with a greater vulnerability to recent violence and HIV risk behaviors, underscoring the need for increased attention to the public health needs of trafficked populations.

Keywords

HIV; Sex trafficking; Sex work; South Asia; Violence

© 2011 International Federation of Gynecology and Obstetrics. Published by Elsevier Ireland Ltd. All rights reserved.

*Corresponding author: Jhumka Gupta, Yale School of Public Health, 60 College Street, Suite 400, New Haven, CT 06510, USA. Tel.: 203-737-4656; fax: 203 785 6279., jhumka.gupta@yale.edu.

Conflict of interest

The authors have no conflicts of interest.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1. Introduction

The sexual exploitation of women and girls is a major human rights violation. Sex trafficking is defined by the United Nations (UN) as “the recruitment, transfer, harboring, or receipt of persons via threat, force, coercion, abduction, fraud, or deception and/or for the purpose of sexual exploitation, including prostitution...or being in sex work while under age 18” [1]. One annual estimate of sex trafficking of women and girls across south Asia is approximated at 150 000 [2].

Vulnerability to HIV infection among women and girls affected by sex trafficking is of concern in India, where some 2.5 million people have HIV [3]. Data from 287 Nepalese women and girls released from sex trafficking in India showed a seroprevalence of 38%, a value that lies within the higher spectrum of HIV prevalence estimates noted among female sex workers (FSWs) in the high-prevalence Indian states of Maharashtra, Andhra Pradesh, Tamil Nadu, and Karnataka (2%–38%) [4,5]. These factors highlight the need to examine what exacerbates HIV vulnerability in this understudied population.

Qualitative work in India indicates that the vulnerability of sex-trafficked women and girls to HIV infection is exacerbated by several mechanisms, including forced unprotected sex, mobility restrictions that preclude access to healthcare and other services, violence upon sex work initiation, and limited autonomy [6]. Interference with access to healthcare and other social services, especially services specifically targeting FSWs, is of particular concern owing to missed opportunities for provision of education, treatment, and related services. Both violence and low autonomy within the sex work environment are thought to heighten risk, owing to reduced ability to negotiate condom use and to control the nature of sex work (e.g. frequency of sex work) [6]. Moreover, by definition, sex-trafficked FSWs are more likely than other FSWs to be minors (<18 years), and thus might face greater demand from male clients for unprotected sex and have diminished ability to negotiate condom use [4,7].

Research on sex trafficking and HIV in India has overwhelmingly focused on NGO-based samples of sex-trafficked women and girls after release from sex work in brothels. To our knowledge, only 1 Indian study (of brothel-based FSWs in west Bengal, India) has specifically examined how experiences might differ between women who entered sex work via trafficking and those who entered for other reasons (e.g. for economic prospects devoid of coercion or force) [8]. That study found that trafficked women had a higher HIV prevalence and experienced more violence upon sex work initiation than other FSWs [8]. The extent to which these findings apply in other Indian geographical contexts or non-brothel (e.g. street- or home-based) settings remains unclear. Such information is needed, given the relatively higher prevalence of HIV in “harder hit” southern states (e.g. Andhra Pradesh) [9], the higher number of non-brothel-based FSWs in these regions [10], and the growing concern about trafficking within non-brothel settings [11].

The aim of the present study was to estimate the prevalence of trafficking as a mode of entry into sex work among a sample of FSWs in Andhra Pradesh, India, and to examine potential differences in sources of HIV risk (including use/non-use of FSW-focused services) between women who entered sex work via trafficking and those who did not.

2. Materials and methods

Data were collected from April 1, 2006, to June 29, 2006, as part of the baseline survey for Project Parivartan, a community-based HIV study in Rajahmundry in the East Godavari District of Andhra Pradesh, India. Eligible women were 18 years or older, reported having had sex in exchange for money in the previous year, and were capable of providing informed consent. Recruitment was via respondent-driven sampling [12,13]. Trained female

Telugu-speaking research assistants orally administered the 90–120-minute quantitative survey in the Parivartan field office. After qualitative field work, consultation of existing studies with FSWs in India, and feedback from local NGO staff, surveys were developed in English, translated into Telugu (by Telugu-speaking research assistants), and back-translated into English (by Telugu-speaking researchers not linked to the study). All study materials had been piloted with FSWs.

Participants received compensation for their time and transportation, and were provided with the option for referral and accompaniment to local FSW services if distress was detected. Yale University Human Investigation Committee, Duke University Medical School's Institutional Review Board, and VHS-YRG Care Medical Centre Institutional Review Board in Chennai approved the study.

Demographic data and sex work characteristics, including current age, education, religion, and sex work venue (i.e. the setting where sex work took place) were assessed via single items. Consistent with the UN definition of sex trafficking [1], women who reported being lured, cheated, or forced into sex work, or who entered sex work when younger than 18 years were considered to have been trafficked into sex work.

The reason for entry into sex work was assessed via a single item. Participants were asked: "Did you start doing sex work because (1) you had to provide for yourself and family; (2) you were advised by a friend/relative; (3) you are a traditional sex worker; (4) you were lured, cheated or forced into the business; (5) you were abandoned or kicked out by family or husband; or (6) you were beaten by husband?" Age of entry into sex work was obtained via a single item that asked participants to report their age when they first began sex work. Years of sex work was calculated by subtracting age of entry from current age.

Recent violence experiences were assessed via 3 items modified from Conflict Tactics Scale 2 [14]. Participants were asked: "In the past 6 months, how many times would you say someone has (1) beaten (e.g. hit, slapped, pushed, kicked, punched, choked, or burned) you (physical violence); (2) threatened you with a knife or gun or used a weapon against you (severe violence); or (3) forced you to have vaginal, anal, or oral sex against your will (sexual violence)?" Three dichotomous variables were created: (1) any violence (yes to all items); (2) any sexual or physical violence (yes to physical or sexual violence items versus no to both); and (3) any threats of severe violence (yes versus no).

Sources of HIV risk were assessed via 5 variables. (1) Number of clients: participants were asked to report the number of male clients that they had sex with in the past 7 days. Responses were dichotomized as less than 10 versus 10 or more. (2) Number of days of sex work: responses to the question of the number of days engaged in sex work during the past week were dichotomized as 3 or less versus 4 or more. (3) HIV knowledge: a 7-item scale was used to assess participants' knowledge about HIV prevention, including transmission. Responses were dichotomized as high knowledge (above the mean) versus low knowledge (below the mean). Each of these items was developed to be consistent with a large-scale survey of at-risk populations in India, including FSWs [15]. (4) Consistent condom use with regular or occasional clients: as previously shown to yield a conservative assessment of self-reported condom use [16], 2 separate items were combined to create the "consistent condom use" variable. First, women were asked whether they used a condom the last time they had sex in the past 7 days. Next, a 5-point Likert scale, ranging from "always" to "never" was used to assess how often FSWs used condoms with clients in the past 7 days. Responses were then dichotomized. Consistent condom use was recorded if the answers were "always" in the past 7 days and "yes" in the past 7 days. All other responses were recorded as

inconsistent. (5) To assess the use of FSW targeted services, women were asked whether they had visited an NGO-affiliated sexually transmitted infection (STI) clinic targeting FSWs (providing treatment) or drop-in center (providing a safe place where FSWs could relax, take classes, or socialize) in the preceding 6 months (created specifically for the survey). Responses were recorded as yes versus no.

To estimate the prevalence of sex trafficking, we calculated the percentage of FSWs who reported either entering sex work when younger than 18 years or being lured, forced, or cheated into sex work. We then calculated prevalence estimates for recent violence experiences, number of clients, and days of sex work in the past 7 days, and consistent condom use, HIV knowledge, and use of FSW-focused services, both for the total sample and for trafficking status. Crude and adjusted regression models (containing duration in sex work, education, and current age) were used to assess whether outcomes differed by trafficking status. Adjusted odds ratios and 95% confidence intervals were used to assess significance at $P < 0.05$ in logistic regression models. All analyses were conducted using SAS version 9.1 (SAS Institute, Cary, NC, USA).

3. Results

In total, 812 FSWs took part in the study. Nearly 1 in 5 ($n=157$, 19.3%) women met the UN definition of being trafficked into sex work (Figure 1). As compared with other FSWs, those entering via trafficking were in sex work longer, were younger, had entered sex work at a younger age, and had less education; no other significant differences emerged (Table 1).

Women entering via sex trafficking were almost twice as likely as other FSWs to report experiencing any form of violence (53.5% versus 39.1%; adjusted odds ratio [AOR], 1.93; 95% confidence interval [CI], 1.32–2.81); physical or sexual violence (53.5% versus 38.4%; AOR, 1.99; 95% CI, 1.36–2.90); and threats of severe violence (11.5% versus 6.1%; AOR, 1.85; 95% CI, 0.99–3.50) (Table 2).

In the week preceding the survey, FSWs who had entered sex work via trafficking were more likely than other FSWs to report having sex with 10 or more clients (41.0% versus 27.0%; AOR, 1.63; 95% CI, 1.11–2.41), and to report engaging in sex work for 4 or more days (71.2% versus 53.3%; AOR, 1.76; 95% CI, 1.18–2.63), and were less likely to report use of FSW-targeted services in the preceding 6 months (44.6% versus 59.1%; AOR, 0.60; 95% CI, 0.42–0.86) (Table 3). Although higher consistent condom use was observed among trafficked FSWs, (50.0% versus 37.9%), the difference was not significant in the adjusted analysis (AOR, 1.20; 95% CI, 0.88–1.92). No significant differences in HIV knowledge were observed.

The aim of the present study was to examine how selected sources of HIV vulnerability varied among FSWs who originally entered sex work via trafficking (based on the UN definition). However, post hoc analysis showed that there was insufficient unique variance between FSWs who entered sex work before age 18 and those who reported being lured, forced, or cheated into sex work as separate variables in the same model. Thus, it was not possible to examine statistically the unique explanatory potential of entering sex work as a minor as compared with being lured, cheated or forced into sex work. Table 4 shows how the main outcomes of interest were distributed within 3 subcategories of FSWs who were considered to have entered sex work via trafficking, in accordance with the UN definition.

4. Discussion

The findings indicate that women who reported originally entering sex work via trafficking were more likely than other FSWs to report various increased vulnerabilities to HIV. The

present study contributes to existing sex trafficking research by estimating the prevalence of trafficking as a mode of entry into sex work in a high-prevalence Indian state, finding that nearly 1 in 5 (19.3%) women from the sample of FSWs in Andhra Pradesh met the UN definition of entering sex work via trafficking, a result that is consistent with research on brothel-based FSWs in West Bengal [8].

Building on previous studies documenting high rates of initiation- or entry-related violence among trafficked women [6,8,11,17], the present study found a higher incidence of recent violence experiences among this group. Previous work indicates that trafficked women are subjected to physical and sexual violence during sex work initiation by diverse perpetrators (e.g. traffickers, other FSWs, brothel managers, and male clients) [6,17,18]. Such violence can continue to be perpetrated against trafficked women to maintain ongoing control.

The longer durations of sex work reported by trafficked FSWs may be due to their younger age of entry. Longer work durations, coupled with greater numbers of clients and numbers of days worked, may also reflect an environment that differentially limits both opportunities to leave sex work and autonomy in deciding terms of labor for women who entered via trafficking, as previously proposed [19,20]. This might, in turn, increase HIV vulnerability. Bolstering this argument is the present finding that women who were trafficked into sex work were significantly less likely to use services at an FSW-focused program, which parallels results from India and elsewhere [6,18]. In addition, stigma and fear or mistrust of other FSWs and authorities might also limit the use of FSW services among trafficked women.

Whereas research on sex-trafficked survivors has documented inability to negotiate condom use [6], the present data indicated that condom use in the past 7 days did not significantly differ according to trafficking status in the adjusted analysis. Nevertheless, at 42%, the overall prevalence of consistent condom use is of great concern. In contrast to existing hypotheses [4,7], the present study also yielded no significant differences with regard to current HIV knowledge. Further research might clarify these observations, including sources of information on HIV, condom use, and condom failure, because a previous study has documented high rates of condom failure among FSWs [21], particularly those experiencing violence [22]. In addition, there may be greater health risks among women who were forced into sex work at a very young age (i.e. <15 years), because this group has been found to have the highest HIV prevalence in previous studies of sex-trafficked populations [4,23]. There may be fewer health risks among women who entered as a minor but were otherwise not coerced, lured, or cheated into sex work; however, more research is warranted.

The present study has limitations. The temporality of associations could not be determined from the cross-sectional data, although we examined recent outcomes based on past exposure. In addition, the reliance on self-report might have led to underreporting of mode and/or age of entry owing to the illegal and stigmatized nature of sex trafficking, and the fear of trafficking agents, brothel managers, and police; however, this might mean that the findings understate the HIV-related vulnerabilities of FSWs who enter sex work via trafficking.

Because violence was not the primary focus of the Project Parivartan survey, there were time and space constraints that necessitated the use of only 3 items to assess violence, thus potentially preventing a broader assessment of violence. Furthermore, the study participants might be less restricted than non-participants; thus, those unable to travel to the research office may experience even greater vulnerabilities.

Owing to insufficient unique variance of entering sex work before 18 years of age and reporting being lured, forced, or cheated into sex work as separate variables in the same

model, we were unable to examine the unique explanatory potential of entering sex work as a minor versus being lured, cheated or forced into sex work. However, the categorization of sex trafficking in the present study is consistent with UN standards. In addition, because the present study is among the first to investigate sex trafficking versus other routes of entry into sex work, it is essential to take a general approach to understand whether sex trafficking (according to the UN definition) is associated with the outcomes of interest. Lastly, because the findings are not reflective of a true probability sample, they are most applicable to FSWs whose demographic data are represented in the present study.

These limitations notwithstanding, the study has identified various unique HIV-related vulnerabilities that are observed to persist years after women have been trafficked into sex work, and has provided insight into how such vulnerability might vary on the basis of being trafficked into sex work as compared with other modes of entry. Although additional research is needed, these findings have important implications for HIV prevention and intervention. They underscore the need for HIV prevention efforts to consider differences among FSWs on the basis of mode of entry when implementing programs and services, including an evaluation to determine whether intervention models that are commonly used with FSWs (e.g. programs that aim to increase FSW negotiation skills with male clients) are comparably effective among women who were trafficked into sex work, or who face violence and other restrictions to their autonomy. Addressing the high prevalence of violence among this group of FSWs by developing resources to aid victims and to change perpetrator behaviors is also necessary.

Lastly, because sex trafficking is a major health concern and violates both national policy and many international protocols and conventions [1,24,25], efforts are needed to reduce sex trafficking. Such efforts might include an evaluation of existing anti-trafficking initiatives (e.g. FSW self-regulatory boards, and anti-trafficking campaigns). The observation that almost 20% of women in the present study met the UN definition of trafficking, coupled with the unique and persisting vulnerabilities associated with entry via trafficking, indicates the need for additional attention to this population within the arena of public health and HIV prevention.

Acknowledgments

Support for this research was provided by the Bill & Melinda Gates Foundation (to KMB). Additional support was from the National Institute of Mental Health (to JG) (T32MH020031). The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Bill & Melinda Gates Foundation, the NIH, or the NIMH.

References

1. United Nations. United Nations Protocol to Prevent, Suppress, and Punish Trafficking in persons, especially women and children, supplementing the United Nations Convention against Transnational Organized Crime. [www.uncjin.orghttp://www.uncjin.org/Documents/Conventions/dcatoc/final_documents_2/convention_%20traff_eng.pdf](http://www.uncjin.org/http://www.uncjin.org/Documents/Conventions/dcatoc/final_documents_2/convention_%20traff_eng.pdf). Published 2000
2. Miko, FT.; Park, G. Congressional Research Service. Trafficking in Women and Children: The U.S. and International Response. [www.fpc.state.gov. http://fpc.state.gov/documents/organization/9107.pdf](http://fpc.state.gov/documents/organization/9107.pdf). Published 2001
3. UNAIDS/WHO. Report on the global AIDS epidemic: Executive summary. [www.unaids.org. http://data.unaids.org/pub/GlobalReport/2006/2006_gr-executivesummary_en.pdf](http://data.unaids.org/pub/GlobalReport/2006/2006_gr-executivesummary_en.pdf). Published 2006
4. Silverman JG, Decker MR, Gupta J, Maheshwari A, Willis BM, Raj A. HIV prevalence and predictors of infection in sex-trafficked Nepalese girls and women. *J Am Med Assoc.* 2007; 298(5): 536–42.

5. Ramesh BM, Moses S, Washington R, Isac S, Mohapatra B, Mahagaonkar SB, et al. Determinants of HIV prevalence among female sex workers in four south Indian states: analysis of cross-sectional surveys in twenty-three districts. *AIDS*. 2008; 22(Suppl 5):S35–44. [PubMed: 19098478]
6. Gupta J, Raj A, Decker MR, Reed E, Silverman JG. HIV vulnerabilities of sex-trafficked Indian women and girls. *Int J Gynecol Obstet*. 2009; 107(1):30–4.
7. Willis BM, Levy BS. Child prostitution: global health burden, research needs, and interventions. *Lancet*. 2002; 359(9315):1417–22. [PubMed: 11978356]
8. Sarkar K, Bal B, Mukherjee R, Chakraborty S, Saha S, Ghosh A, et al. Sex-trafficking, violence, negotiating skill, and HIV infection in brothel-based sex workers of eastern India, adjoining Nepal, Bhutan, and Bangladesh. *J Health Popul Nutr*. 2008; 26(2):223–31. [PubMed: 18686555]
9. National Institute of Health and Family Welfare, National AIDS Control Organization. HIV Sentinel Surveillance 2006 India Country Report. www.nacoonline.org.
http://www.nacoonline.org/upload/NACO%20PDF/HIV%20Sentinel%20Surveillance%202006_India%20Country%20Report.pdf. Published 2007
10. Claeson M, Alexander A. Tackling HIV in India: evidence-based priority setting and programming. *Health Aff (Millwood)*. 2008; 27(4):1091–102. [PubMed: 18607044]
11. Nair, PM.; Sen, S. A report on trafficking of women and children in India: 2002–2003. www.nhrc.nic.in. <http://www.nhrc.nic.in/Documents/ReportonTrafficking.pdf>. Published 2004
12. Magnani R, Sabin K, Saidel T, Heckathorn D. Review of sampling hard-to-reach and hidden populations for HIV surveillance. *AIDS*. 2005; 19(Suppl 2):S67–72. [PubMed: 15930843]
13. Semaan S, Lauby J, Liebman J. Street and network sampling in evaluation studies of HIV risk-reduction interventions. *AIDS Rev*. 2002; 4(4):213–23. [PubMed: 12555695]
14. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The Revised Conflict Tactics Scales (CTS2). *J Family Issues*. 1996; 17(3):283–316.
15. Indian Council of Medical Research, Family Health International. National Interim Summary Report-India. Integrated Behavioral and biological Assessment (IBBA), Round 1 (2005–2007). www.nari-icmr.re.in. <http://www.nari-icmr.res.in/IBBA/IBBA-NISR.pdf>. Published 2007
16. Blankenship KM, West BS, Kershaw TS, Biradavolu MR. Power, community mobilization, and condom use practices among female sex workers in Andhra Pradesh, India. *AIDS*. 2008; 22 (Suppl 5):S109–16. [PubMed: 19098471]
17. Zimmerman C, Hossain M, Yun K, Gajdadziev V, Guzun N, Tchomarova M, et al. The health of trafficked women: a survey of women entering posttrafficking services in Europe. *Am J Public Health*. 2008; 98(1):55–9. [PubMed: 18048781]
18. Rushing R, Watts C, Rushing S. Living the reality of forced sex work: perspectives from young migrant women sex workers in northern Vietnam. *J Midwifery Womens Health*. 2005; 50(4):e41–4. [PubMed: 15973256]
19. Hennink, M.; Simkhada, P. Sex Trafficking in Nepal: Context and Process. [www.eprints.soton.ac.uk](http://eprints.soton.ac.uk). <http://eprints.soton.ac.uk/34733/1/Sex%20trafficking%20WP11.PDF>. Published 2004
20. Zimmerman, C.; Yun, K.; Shvab, I.; Watts, C.; Trappolin, L.; Treppete, M., et al. The health risks and consequences of trafficking in women and adolescents: Findings from a European study. www.lshtm.ac.uk. <http://www.lshtm.ac.uk/php/ghd/docs/traffickingfinal.pdf>. Published 2003
21. Ntumbanzondo M, Dubrow R, Niccolai LM, Mwandagilirwa K, Merson MH. Unprotected intercourse for extra money among commercial sex workers in Kinshasa, Democratic Republic of Congo. *AIDS Care*. 2006; 18(7):777–85. [PubMed: 16971288]
22. Choi SY, Chen KL, Jiang ZQ. Client-perpetuated violence and condom failure among female sex workers in southwestern China. *Sex Transm Dis*. 2008; 35(2):141–6. [PubMed: 17921913]
23. Silverman JG, Decker MR, Gupta J, Maheshwari A, Patel V, Raj A. HIV prevalence and predictors among rescued sex-trafficked women and girls in Mumbai, India. *J Acquir Immune Defic Syndr*. 2006; 43(5):588–93. [PubMed: 17019369]
24. United Nations. Convention on the Rights of the Child. www.rights4me.org.
http://www.rights4me.org/pdf/20060816%20YOUR%20RIGHTS%20UN_Convention.pdf. Published 1989
25. Indian Penal Code. Immoral Trafficking Prevention Act. 1986.

Figure 1.
Distribution of FSWs who met the UN definition of originally entering sex work via trafficking.

Table 1

Prevalence of sex trafficking as a mode of entry into sex work and bivariate associations with demographic data^a

Demographic variables	Total ^b	Trafficked ^c	Not trafficked ^d	P value
Number of participants	812	157 (19.3)	655 (80.7)	
Years in sex work				<0.0001 (Wald χ^2 test)
<1 year	171 (21.1)	15 (9.6)	156 (23.8)	
1–3 years	432 (53.2)	55 (35.0)	377 (57.6)	
3 years	209 (25.7)	87 (55.4)	122 (18.6)	
Current marital status				0.52 (Wald χ^2 test)
Never married	90 (11.1)	18 (11.5)	72 (11.0)	
Currently married	173 (21.3)	28 (18.0)	145 (22.1)	
Separated/divorced/widowed	548 (67.6)	110 (70.5)	438 (79.9)	
Current age, years	32.0 $\pm$ 8.2	30.2 $\pm$ 9.3	32.5 $\pm$ 8.0	0.001 (τ test)
Age of entry into sex work, years	23.4 $\pm$ 7.2	16.1 $\pm$ 3.7	25.8 $\pm$ 6.6	<0.0001 (t test)
Education				0.004 (Wald χ^2 test)
No formal education	445 (54.8)	87 (55.4)	280 (42.8)	
Some formal education	367 (45.2)	70 (44.6)	375 (57.3)	
Religion				0.29 (Fisher exact test)
Hindu	445 (54.8)	93 (59.2)	352 (53.7)	
Muslim	13 (1.6)	4 (2.6)	9 (1.4)	
Christian	352 (43.4)	60 (38.2)	292 (44.6)	
Other	2 (0.3)	0 (0.0)	2 (0.3)	
Venue of sex work				0.16 (Fisher exact test)
Brothel only	41 (5.1)	13 (8.3)	28 (4.3)	
Street only	113 (14.0)	18 (11.5)	95 (14.6)	
Lodge/hotel only	75 (9.3)	10 (6.4)	65 (10.0)	
Home only	200 (24.8)	41 (26.1)	159 (24.4)	
Highway only	176 (21.8)	35 (22.3)	141 (21.7)	
Agriculture only	93 (11.5)	14 (8.9)	79 (12.1)	
Multiple types	110 (13.6)	26 (16.6)	84 (12.9)	

^aValues are given as mean $\pm$ SD or number (percentage) unless stated otherwise.

^bThe total number was less than 812 because data were missing.

^cThe total number was less than 157 because data were missing.

^dThe total number was less than 655 because data were missing.

Table 2

Crude and adjusted relations between recent experiences of violence and sex trafficking as a mode of entry into sex work^a

	Total (n=812)	Trafficked (n=157)	Not trafficked (n=655)	Odds ratio	Adjusted odds ratio
Any violence	340 (41.9)	84 (53.5)	256 (39.1)	1.79 (1.26–2.54) ^{b,c}	1.66 (1.16–2.38) ^{b,c,d}
Any physical or sexual violence	335 (41.3)	84 (53.5)	251 (38.3)	1.85 (1.30–2.62) ^{b,c}	1.72 (1.20–2.46) ^{b,c,d}
Any threats of violence	58 (7.1)	18 (11.5)	40 (6.1)	2.00 (1.11–3.59) ^{b,c}	1.68 (0.99–3.07) ^{b,c,d,e}

^aNote that experiences of violence are not mutually exclusive. Values are number (percentage) or odds ratio (95% CI).

^bWomen not trafficked comprise the reference group.

^cSignificant at $P<0.05$, by Wald confidence intervals.

^dAdjusted for years in sex work, current age, and education.

^e $P=0.05$.

Table 3

Crude and adjusted associations between sources of HIV risk and sex trafficking as a mode of entry into sex work^a

Sources of HIV risk	Total ^b (n=812)	Trafficked ^c (n=157)	Not trafficked ^d (n=655)	Odds ratio	Adjusted odds ratio
Number of clients in past 7 days					
<10	565 (70.3)	92 (59.0)	473 (72.2)	1.81 (1.31–2.70) ^e	1.80 (1.25–2.60) ^{e,f,g}
10	239 (29.7)	64 (41.0)	175 (27.0)		
Number of days of sex work in past 7 days					
3 days	354 (44.0)	45 (28.9)	309 (47.7)	2.25 (1.54–3.29) ^e	2.15 (1.47–3.16) ^{e,f,g}
4 days	450 (56.0)	111 (71.2)	339 (52.3)		
HIV knowledge					
Low	548 (80.7)	104 (81.9)	444 (80.4)	1.10 (0.97–1.81) ^{e,f}	1.72 (0.97–3.03) ^{e,f,g}
High	131 (19.3)	23 (18.1)	108 (19.6)		
Condom use with occasional and regular male clients					
Consistent use	323 (40.2)	78 (50.0)	245 (37.9)	1.64 (1.15–2.33) ^{e,f}	1.01 (0.68–1.53) ^{e,f,g}
Inconsistent use	480 (59.8)	78 (50.0)	402 (62.1)		
Use of FSW- focused program					
Yes	457 (56.3)	70 (44.6)	387 (59.1)	0.56 (0.39–0.79) ^{e,f}	0.59 (0.41–0.84) ^{e,f,g}
No	355 (43.7)	87 (55.4)	268 (40.9)		

^aData are number (percentage) or odds ratio (95% CI).^bTotals may be less than 812 because data were missing.^cTotals may be less than 157 because data were missing.^dTotals may be less than 655 because data were missing.^eWomen not trafficked comprise the reference group.^f $P < 0.05$, by Wald confidence intervals.^gAdjusted for years in sex work, current age, and education.

Table 4

Frequency of recent violence experiences and sources of HIV risk among FSWs who originally entered sex work via trafficking (n=156)^a

	Entered sex work as a minor (<18 years)		Entered sex work as an adult (≥ 18 years)
	Reported being forced, lured, or cheated into sex work (n=26)	Did not report being forced, lured or cheated into sex work (n=96)	Reported being forced, lured, or cheated into sex work (n=34)
Violence experiences in past 6 months			
Any violence	61.5	52.1	52.9
Any physical or sexual violence	61.5	52.1	52.9
Any threats of severe violence	23.1	9.4	8.8
Sources of HIV risk			
Number of clients in past 7 days			
<10	50.0	60.4	61.8
10	50.0	39.6	38.2
Number of days of sex work in past 7 days			
3 days	30.8	26.0	35.3
4 days	69.2	74.0	64.7
HIV knowledge			
Low	64.4	68.0	58.8
High	35.6	32.0	41.2
Condom use with occasional and regular male clients in past 7 days			
Consistent use	50.0	51.0	47.1
Inconsistent use	50.0	49.0	52.9
Use of FSW-focused services in past 6 months			
Yes	30.8	52.1	32.4
No	69.2	47.9	67.6

^aValues are given as column percentages.