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Transactional sex and the challenges to safer sexual behaviors: a study among male sex workers in Chennai, India

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Abstract

Male sex workers (MSW) are a significant but invisible population in India who are at risk for HIV/STI. Few studies from India have documented HIV risk factors and motivations for sex work in this population. Between 2013 and 2014, a community-based convenience sample of 100 MSW in Chennai (south India) completed a baseline risk assessment as part of a behavioral intervention. Participants were 18 years, and reported current sex work. We report medians and proportions, and Wilcoxon-Mann-Whitney and chi-square tests are used to examine differences between sex work and sexual behavior measures by income source. Participants were engaged in sex work for 5.0 years (IQR=2.3-10.0), and earned 3,000 (IQR=2000-8000) Rupees (<50 USD) per month from sex work. Sixty-four percent reported ever testing for HIV and 20.2% for any STI. The most common reasons for starting sex work were money (83.0) and pleasure (56.0%). Participants reported 8.0 (IQR=3.0-15.0) male clients and 7 (IQR=4.0-15.0) condomless anal sex acts with male clients in the past month. Compared to participants with an additional source of income, those whose only source of income was sex work reported more male clients in the past month

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(10.0 vs. 6.0, $p=0.017$), as well as more condomless anal sex acts with male clients (8.0 vs. 5.0, $p=0.008$). Nearly 70.0% were offered more money not to use a condom during sex with a client, and 74.2% reported accepting more money not to use a condom. Three-quarters reported having experienced difficulty using condoms with clients. MSW in India engage in high levels of sexual risk for HIV/STIs. Money appears to be a driving factor for engaging in sex work and condomless sex with clients. HIV prevention interventions with MSW should focus on facilitating skills that will support their ability to negotiate sexual safety in the context of monetary disincentives.

Keywords

men who have sex with men; HIV prevention; male sex workers; India; sexual risk

Introduction

The HIV epidemic in India is fueled by sexual transmission, primarily between men who have sex with men (MSM) (National AIDS Control Organization, 2015; UNAIDS, 2013). Estimates of the prevalence of HIV among MSM in India generally range from 7.0 to 16.5% (Joint United Nations Programme on HIV/AIDS, 2010; Thomas et al., 2009), significantly higher than the India National AIDS Control Unit 2015 estimate of the overall HIV prevalence in India of 0.36% (National AIDS Control Organization, 2015). An invisible and often ignored population due to stigma and societal expectations, male sex workers (MSW) who have sex with men are at elevated risk for HIV and other STIs compared to the broader MSM population. Contextual factors related to sex work, including stigma, increased financial incentives for riskier behaviors, and lack of access to prevention services make it likely that the prevalence of HIV and STIs among MSW exceeds that of the broader MSM population in India (Biello, Colby, Closson, & Mimiaga, 2014; Chakrapani, Shunmugam, Newman, Kershaw, & Dubrow, 2015; Closson et al., 2015; Oldenburg, Biello, et al., 2014; Oldenburg et al., 2015; Shinde, Setia, Row-Kavi, Anand, & Jerajani, 2009). Few studies have sought to estimate the prevalence of HIV among MSW specifically, with some estimates as high as 33.0% among a population of MSW living in Maharashtra (Shinde et al., 2009). Despite their increased risk and significant contribution to the HIV epidemic in India (National AIDS Control Organization, 2015; UNAIDS, 2013), MSW remain understudied when compared to female sex workers and the broader population of MSM in India.

Previous studies that have sought to characterize the MSW population in India have been limited in scope, and geographically concentrated in Mumbai and Hyderabad, two of the largest cities in India (Narayanan et al., 2013; Shinde et al., 2009). Shinde et al. identified an HIV prevalence of 17.0% and a syphilis prevalence of 28% among MSW in Mumbai, 13.0% of which report never having used a condom (Shinde et al., 2009). Using data from a study of MSM attending STI clinics in Mumbai and Hyderabad, Narayanan et al. reported an HIV prevalence of 43.6% among MSM who engage in sex work (Narayanan et al., 2013). In Chennai – the biggest industrial and commercial center of South India – the prevalence of HIV and risk factors for HIV acquisition among the broader MSM community have been characterized (Chakrapani, Newman, & Shunmugam, 2008; Go et al., 2004; Mimiaga et al.,

2011; Thomas et al., 2009). Thomas et al. identified not having previously engaged in an HIV prevention program, having symptoms of clinical depression and lower self-efficacy as predictors for MSM engaging in unprotected anal intercourse, a key risk factor for testing positive for HIV (Thomas et al., 2009). Despite this, limited research has examined behavioral factors and sexual risk specifically among MSW in India.

While numerous studies have examined HIV risk behavior among MSW in other parts of Southeast Asia (Biello et al., 2014; Chemnasiri et al., 2010; Colby et al., 2012; Guadamuz et al., 2010; Toledo et al., 2010), these studies have focused on Thailand and Vietnam. To the best of our knowledge, no studies have explored risk factors and motivations for engaging in sex work among MSW in India (Shinde et al., 2009). Using baseline data from a pilot intervention study to reduce HIV risk, we describe sociodemographic risk factors, motivations for sex work, sexual behaviors, and sex work characteristics among a sample of 100 MSW in Chennai, India.

Methods

Participants and Procedures

Between July 2013 and June 2014 one hundred MSW from Chennai, India completed a baseline behavioral assessment battery as part of their involvement in a pilot of an HIV prevention intervention for MSW. Participants were 18 years or older, born biologically male at birth, identified as male, and reported having anal sex (insertive or receptive) with another man in exchange for money, goods, favors or gifts, in the 3 months prior to enrollment. MSW were recruited by trained employees of Sahodaran, a non-governmental organization that provides HIV-related prevention and care services, and other support services to MSM in Chennai. Sahodaran staff provided MSM information about the study during normal street-based outreach activities, and those interested were then able to reach out to study staff. MSM were informed that their participation, refusal to participate, or withdrawal from the study in no way would affect their services at Sahodaran. *Hijra* (transgender women) were not included in the current study, as previous studies have shown that *hijra* have a distinct set of needs and specific interventions should be designed to target gender minority populations (Altaf, Zahidie, & Agha, 2012; Phillips et al., 2013; Sahastrabudde et al., 2012). The assessment battery was administered in Tamil by a trained research assistant in a private room at the National Institute for Research on Tuberculosis in Chennai. However, the section on sexual transmission risk behaviors was assessed using an audio-computer assisted self-interview (A-CASI) device in order to reduce social desirability bias (Kurth et al., 2004). Additionally, participants received HIV counseling and testing by trained counselors. Three percent of the sample had a reactive test at baseline.

All participants completed a written informed consent process before data collection commenced. Procedures were approved by the Institutional Review Boards at Fenway Health as well as the Ethics Committees at National Institute for Research on Tuberculosis and the Indian Council for Medical Research.

Measures

Personal Characteristics—The assessment included questions on age, education, relationship status, religion, alcohol use, and HIV status. We also assessed sexual identity using categories appropriate for India: *Panthi* (i.e., MSM who display more masculine characteristics and are exclusively insertive), *Kothi* (i.e., MSM who typically display more effeminate characteristics and are likely to take the receptive role in sex) or *Double-Decker* (i.e., MSM who do not necessarily display effeminate characteristics and may have sex with either men or women, and may be either insertive and/or receptive during anal sex) (Asthana & Oostvogels, 2001).

Sex work—Participants reported the number of years that they had been engaged in sex work, their typical monthly income from sex work, and whether sex work was their only source of income. Participants were asked to report reasons for starting and continuing sex work, separately. They could choose as many as they endorsed from the following response options (which were informed by formative work in an earlier phase of this study): money, money for family, pay for drugs, place to sleep, excitement, pleasure, educational expenses, coerced/forced, feel better about myself. Additionally, participants were asked if they had any desire to stop doing sex work, and how often they felt good about engaging in sex work. Participants were also asked whether they had experienced any of the following forms of violence while engaging in sex work: (i) verbal abuse; (ii) physical abuse; (iii) forced to not use a condom; (iv) forced anal sex; and (v) forced alcohol use.

Sexual behaviors—Participants reported the number of male clients and non-paying male sex partners they had in past month and how many times they had condomless anal sex with these partners and clients. To assess condom use self-efficacy, participants were asked if they had ever been *offered* more money not to use a condom with a client, if they ever *accepted* more money not to use a condom with a client, and if they ever had difficulty using condoms with male clients and non-paying sex partners. Finally, the assessment had a series of questions on sexual activity with participants' most recent clients, including the amount paid, what sexual acts occurred, knowledge of client's HIV status and frequency of condom use.

Statistical Methods

Medians (with interquartile ranges) for continuous variables and frequencies for categorical variables were calculated to describe characteristics of the participants, overall and stratified by whether or not sex work was the only source of income. Wilcoxon-Mann-Whitney tests and chi-square tests were used to test differences by income source across personal characteristics, sex work related measures, and sexual behaviors. Multivariable logistic regressions were used to assess the association between income source and the sexual behavior and sex work related variables, controlling for age, sexual orientation, education and religion. All analyses were conducted in SAS statistical analysis software (version 9.4).

Results

Personal characteristics are described in Table 1. In brief, the median age of the participants was 25 years (IQR=21.0-31.75). Kothi was the predominant (77.0%) sexual identity of the

sample. Half of participants had completed secondary education or less, and 86.0% identified as Hindu. Nearly two-thirds (63.6%) reported having ever been tested for HIV (outside of the current study) and one-fifth (20.2%) for any STIs.

Forty-one percent reported that their only source of income came from sex work. There were no significant differences in personal characteristics by source of income. The most common reasons for starting and for continuing sex work were money (83.0% and 93.0%, respectively) and pleasure (56.0% and 50.0%, respectively). The least common reasons were to pay for drugs (0.0% and 1.0%, respectively) and or because they were coerced (1.0% and 0.0%, respectively). These reasons did not differ significantly by income source (all $p>0.05$). While 37.0% reported having a desire to stop doing sex work at some time, nearly three-quarters (72.0%) reported usually or always feeling good about engaging in sex work.

Experiences of violence while engaging in sex work are summarized in Figure 1. In multivariable models, adjusting for age, sexual orientation, education and religion, participants whose only source of income was from sex work were nearly six times as likely to report verbal abuse (aOR= 5.73, 95% CI 1.47-22.25; $p=0.012$) compared to those who had an additional source of income. While less common overall (13.0%), participants whose only source of income was from sex work were also five times as likely to report forced anal sex compared to those who had an additional source of income; however, this was no longer statistically significant in multivariable models (aOR= 5.24, 95% CI 0.78-29.0; $p=0.089$). Being forced to not use a condom for anal sex (43.0%), physical abuse (29.3%), and forced alcohol use (24.0%) were common, but did not significantly differ by income source (all $p>0.10$).

Sexual behaviors are reported in Table 2. The median number of years doing sex work was 5 (IQR=2.3-10.0), with a typical monthly income from sex work reported as 8,000 Rupees (approximately 123 USD) for participants whose income was from sex work only and 2,000 Rupees (approximately 31 USD) for participants who had other income ($p<0.001$). Compared to those who had other income, participants whose only income came from sex work reported significantly more male clients (median=10.0 vs. 6.0, $p=0.017$) and more condomless anal sex acts with male clients (median=8.0 vs. 5.0, $p=0.008$) in the past month. However, in multivariable models adjusting for age, sexual orientation, education and religion, only the association between monthly income from sex work (in thousands of Rupees) and source of income remained statistically significant (aOR=1.44, 95% CI 1.15-1.80; $p<.001$). Over two-thirds of participants (70.0%) reported being offered more money to not use a condom with a client, of which 74.2% report accepting the money to not use a condom. Two-thirds reported difficulty using condoms with clients. These did not differ significantly by income source in bivariate or multivariable models.

When asked about sex with their most recent client (Table 2), participants reported being paid 350 Rupees (IQR=150.0-600.0) (approximately 5 USD) for the most recent transaction. Most participants reported that this sexual act included receptive anal sex (70.0%) and/or receptive oral sex (64.0%). A small minority reported insertive anal sex (6.0%) or insertive oral sex (9.0%) at last transaction, which differed significantly by income source in bivariate analysis (17.1% vs. 3.4%, $p=0.019$) but not in multivariable analyses (aOR=4.69, 95% CI

0.76, 28.76; $p=0.09$). Approximately half of participants reported that they did not know the HIV status of their most recent client, and 86.0% did not use a condom during the most recent sex act with a client.

Discussion

Findings from the present study describe high levels of sexual risk for HIV/STIs among MSW in Chennai, India. In the past month, MSW reported having 8 paying male clients and anal intercourse without a condom with male clients 7 times. Moreover, nearly half of participants did not know the HIV status of their most recent client, and 86.0% did not use a condom during the most recent sex with a client, considerably higher than reported in studies among MSW in other countries, including in Asian, Latin America and Europe (Ballester-Arnal, Gil-Llario, Salmeron-Sanchez, & Gimenez-Garcia, 2014). Both behaviors are demonstrated risk factors for HIV/STI infection among MSM (S. Baral et al., 2009; Fan et al., 2012; Koblin et al., 2006; Trapence et al., 2012). In a study of 500 MSW living in Beijing, China, for example, Fan et al. found that not knowing the HIV status of the most recent male partner was associated with HIV infection (Fan et al., 2012).

Experiences of violence while engaging in sex work are common in this sample with high rates of verbal abuse and being forced to have anal sex without a condom. Instances of sexual violence among MSW have been commonly reported previously in other Asian countries. Biello et al. reported sexual violence prevalence at 19.8% among a population of 300 MSW in Ho Chi Minh City, Vietnam (Biello et al., 2014). Among sex workers in low- and middle-income countries, including those who identify as male, female, and transgender, experiencing violence is associated with an increase in HIV risk (S. Baral et al., 2012; S. Baral et al., 2014; S. D. Baral et al., 2015; Dunkle et al., 2013; Oldenburg et al., 2015; Oldenburg, Perez-Brumer, et al., 2014; Ulibarri et al., 2015). Previous studies have posited that violence can reduce a sex worker's ability to negotiate or control an encounter with a client, and their ability to use a condom with a client (Oldenburg, Perez-Brumer, et al., 2014; Ulibarri et al., 2015). Further, if a sex worker insists on using a condom, a client may turn violent and force the sex worker to have sex without a condom (Harcourt & Donovan, 2005).

Economic concerns appear to be a driving factor for engaging in sex work and higher risk sex with clients in this sample. A large majority of participants indicated that a reason for starting and engaging in sex work was money. Moreover, over two-thirds of participants reported being offered more money to not use a condom with a client. Previous studies have documented sex workers accepting additional financial incentives in exchange for unprotected sex, leading to an increased risk for HIV acquisition (Ballester-Arnal et al., 2014; Ballester, Salmeron, Gil, & Gomez, 2012; Muldoon et al., 2015; Nemoto et al., 2012; Patterson et al., 2012). A study of female sex workers in India conducted by Erausquin et al. between 2006 and 2010 identified accepting additional financial incentives for unprotected sex as a risk factor for HIV and STIs (Erausquin, Reed, & Blankenship, 2014). Moreover, those whose only source of income comes from sex work reported higher rates of violence in the context of sex work and more condomless anal sex with clients. Notably, most participants reported that sex work also provides pleasure and that they usually or always

feel good about engaging in sex work. Together, these results suggest that a harm reduction approach to HIV/STI risk reduction may be appropriate, rather than focusing on abstaining from sex work all together.

These findings should be understood in the context of the study's limitations. The sample was not randomly selected and may not be representative of MSW in Chennai, India, and may not generalize to MSW in other cities and countries with distinct cultural norms and policies. Moreover, as with all self-report data, responses may be subject to social desirability or recall bias. However, importantly, the most sensitive sexual behavior questions were collected using ACASI in order to reduce self-report bias. Additionally, given that the survey used close-ended questions, the results may not represent the entire wide range of sex work experiences. Notably, in an earlier phase of this study, formative work was conducted and data was used to inform this study.

Notwithstanding these limitations, this study is, to the best of our knowledge, the first to characterize risk factors and motivations for engaging in sex work among MSW in Chennai, India. While exploratory in nature, these results suggest that HIV prevention interventions for MSW should explore supporting safe sexual practices, including facilitating sexual safety negotiation skills and strategies, in the face of monetary disincentives to do so, particularly given that many MSW may not want to stop sex work (Reed, Gupta, Biradavolu, & Blankenship, 2012).

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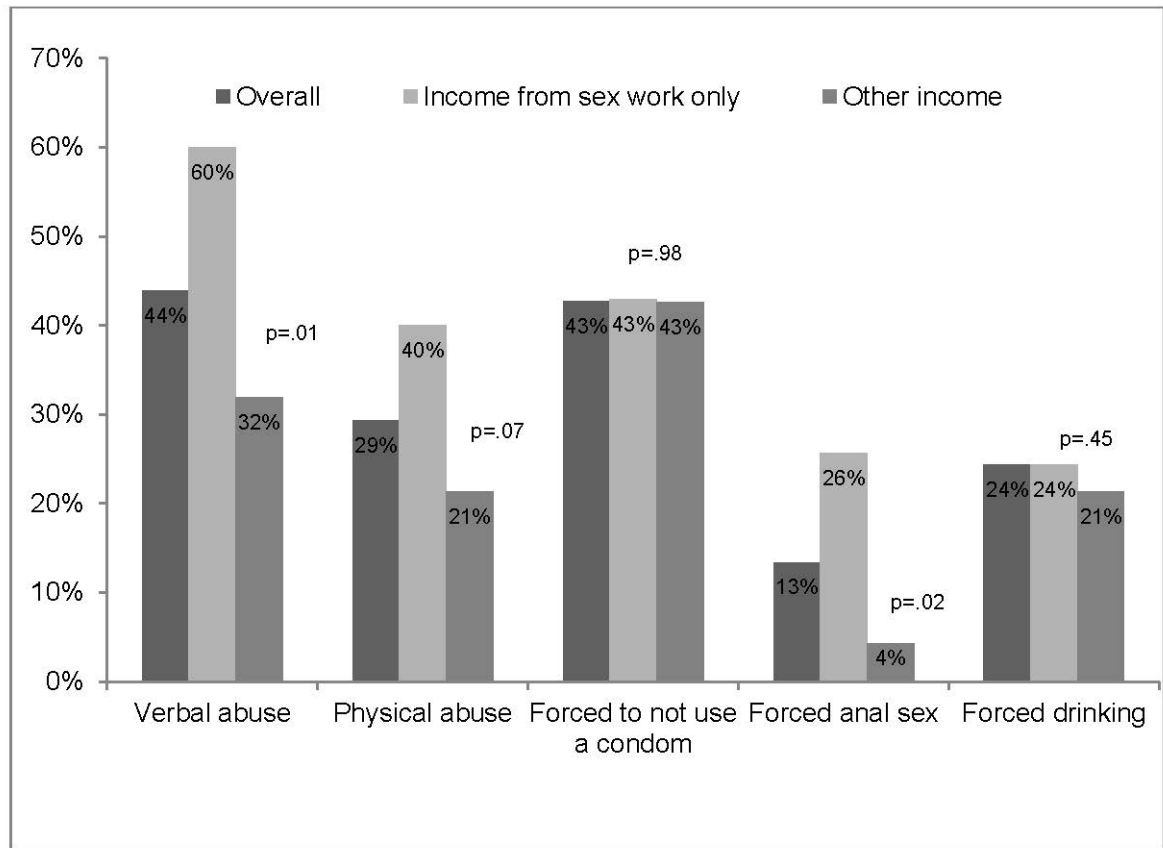


Figure 1. Experiences of violence while engaging in sex work among male sex workers, Chennai, India (N=100)

Table 1
Personal Characteristics among male sex workers, Chennai, India (N=100)

	Overall (n=100)	Income from sex work only (n=41)	Other source of income (n=59)	Chi-Square test statistic	p
	Median (IQR)				
Age	25.0 (21.0-31.75)	23 (21-30)	26 (22-34)	2.55	.110
	% (N)				
Sexual Orientation				0.15	.928
Pantheri	2.00 (2)	2.44 (1)	1.69 (1)		
Kothi	77.00 (77)	78.05 (32)	76.27 (45)		
Double Decker	21.00 (21)	19.51 (8)	22.03 (13)		
Education				5.27	.072
Secondary or less	50.0 (50)	36.59 (15)	59.32 (35)		
Higher Secondary	19.0 (19)	21.95 (9)	16.95 (10)		
College or more	31.0 (31)	41.46 (17)	23.73 (14)		
Religion				2.44	.118
Hindu	85.86 (85)	92.5 (37)	81.36 (48)		
Other	14.14 (14)	7.50 (3)	18.64 (11)		
Ever tested for HIV	63.64 (63)	65.00 (26)	62.71 (37)	0.05	.816
Ever tested for STD	20.20 (20)	15.00 (6)	23.73 (14)	1.13	.289
Ever any STD symptoms	14.0 (14)	19.51 (8)	10.17 (6)	1.75	.185
HIV infected (via rapid testing)	3.0 (3)	2.44 (1)	3.39 (2)	0.08	.784
No alcohol use during sex in past 3 months	51.00 (51)	51.22 (21)	50.85 (30)	0.001	.971

Table 2
Sexual behaviors and sex work-related measures among male sex workers, Chennai, India (N=100)

	Overall (n=100)	Income from sex work only (n=41)	Other income (n=59)	Chi-Square test statistic	p
	Median (IQR)				
Years doing sex work	5.0 (2.3-10.0)	4 (2-8)	7 (2.6-10)	2.48	.116
Typical monthly income from sex work, in thousands of Rupees	3 (2-8)	8 (5-15)	2 (1.5-3)	29.97	<.001
No. of non-paying male partners, past month	2 (0-6)	2 (0-7)	2 (0-5)	0.17	.681
No. of times condomless anal sex with non-paying male partners, past month	1 (0-4)	2 (0-5)	1 (0-4)	0.52	.470
No. of paying male clients, past month	8 (3-15)	10 (6-20)	6 (3-10)	5.73	.017
No. of times condomless sex with paying male clients, past month	7 (4-15)	8 (6-20)	5 (3-10)	7.09	.008
	%				
Ever been offered more money to NOT use condom	69.4	77.5	63.8	2.09	.148
Difficulty using condoms with non-paying partners				0.61	.739
Yes	55.0	58.5	52.5		
No	26.0	21.9	28.8		
Don't Know	19.0	19.5	18.6		
Difficulty using condoms with clients				0.41	.816
Yes	66.7	70.0	64.4		
No	21.2	20.0	22.0		
Don't Know	12.1	10.0	13.6		
Sex with Most Recent Client					
	Median (IQR)				
Rupees paid for most recent sex act	350 (150-600)	400 (200-800)	300 (100-500)	0.78	0.376
	%				
During this sexual act, which of the following occurred?					

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	Overall (n=100)	Income from sex work only (n=41)	Other income (n=59)	Chi-Square test statistic	p
Receptive oral sex	64.0	68.3	61.0	0.56	0.456
Insertive oral sex	9.0	17.1	3.4	5.53	0.019
Receptive anal sex	70.0	73.2	67.8	0.33	0.564
Insertive anal sex	6.0	9.8	3.4		0.088
Knowledge of client HIV status during most recent sex act				0.78	0.677
Client did NOT have HIV	51.0	46.3	54.2		
Client did have HIV	3.0	2.4	3.4		
Did NOT KNOW HIV status of client	46.0	51.2	42.4		
Used a condom during most recent sex act with client	14.0	12.2	15.3		0.665