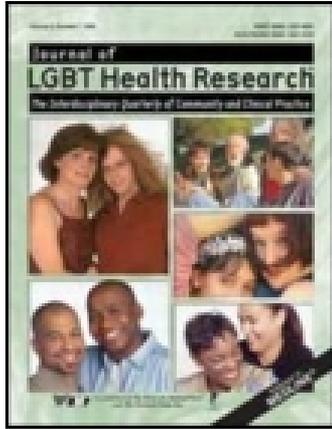


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Multiple Risks Among Male and Transgender Sex Workers in Pakistan

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ABSTRACT. Using data from a qualitative study and a subsequent quantitative survey among 918 male and transgender sex workers (MTSW), we explore the context of multiple risks they face. We show that over one-fifth of MTSW have sex with IDU clients. Combined with high levels of risk behavior and very low levels of risk reduction and knowledge, the extent of sexual networking with men who inject drugs contributes further to the sex workers' health risks. Our findings suggest that isolated interventions with single-risk groups are unlikely to be sufficient to control the spread of the epidemic in Pakistan. We highlight the need for integrated approaches to risk reduction programs among MTSW and IDUs.

KEYWORDS. Transgender, male sex work, Pakistan, HIV, multiple risk

The HIV epidemic in Pakistan is currently classified as being concentrated—it has, to date, mainly been found in communities of injecting drug users (IDUs) in some cities (National AIDS Control Programme, 2007). The first outbreak occurred in the small town of Larkana (Sindh Province), where 9.7% (17/175) of IDUs tested positive for HIV in 2003 (Shah, Altaf, Mujeeb, & Memon, 2004). This was followed by another outbreak in 2004, where 23% tested positive for HIV in Karachi, compared to < 1% found in the same subpopulation only 7 months previously (Shah et al., 2004). A high prevalence of hepatitis C virus (HCV) among some parts of the

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IDU population in Pakistan suggests frequent needle sharing, thus raising the potential of a widespread epidemic once HIV fully penetrates the IDU network (Altaf et al., 2007; Haque et al., 2004; Shah et al., 2004).

HIV has only recently started to penetrate the commercial sex networks. A 2007 study in Karachi showed 3.2% (19/601) of male and transgender sex workers (MTSW) to be HIV positive (Bokhari et al., 2007). In addition, the 2007 United Nations General Assembly Special Sessions on HIV/AIDS (UNGASS) Pakistan report also gave estimates of HIV prevalence among MTSW ranging from 1.5% to 1.8% (95% CI 1.3%–2.5%). In Rawalpindi in 2007, HIV prevalence was 2.4% (95% CI 0.4%–4.3%) in transgender (*khusra*) and 0.5% (95% CI 0.01%–1.5%) in *bantha* (men with male gender identity), yet 0% in *khotki* (biological men with a “female soul” and feminized traits; Hawkes et al., 2009). We believe it is important to understand networking between sex workers and IDU to gauge the potential course of the epidemic in Pakistan. Several studies in Pakistan have reported a proportion of IDUs buying sex and displaying poor condom use behavior with paid sex workers (Altaf et al., 2007; Bokhari et al., 2007; Haque et al., 2004; Kuo et al., 2006; Zafar, Brahmhatt, Imam, ul Hassan, & Strathdee, 2003). For example, Haque et al. (2004) found that 50.8% of 360 IDUs reported to have ever paid for sex. In particular, 30.1% of male IDUs reported buying sex from men and women, and 13.4% reported buying sex exclusively from men. As well, condom use was very low among this group, with only 10% of IDUs who purchased sex had ever used a condom (Haque et al., 2004).

In this article, we focus on multiple risk behaviours among MTSW by exploring the context of their relationship with clients who are IDUs. Data are presented from a qualitative study and from a subsequent quantitative survey conducted in the cities of Rawalpindi (Punjab) and Abbotabad (North West Frontier Province) in 2007. The profile of MTSW with IDU clients are compared with the profile of MTSW who do not entertain IDUs among their clients. Because condoms are the only effective barrier to prevent sexually transmitted infection (STI) and HIV

transmission, we explore the factors influencing condom use.

METHODS

Qualitative Research

Qualitative data were collected by peer ethnography: Two separate groups of 15 transgender (*khusras*) and 15 male sex workers were trained as peer researchers in December 2006. The research process revealed that male sex workers consist of two distinct groups: *khotkis* (feminized men) and *banthas* (with a masculine identity). Peer researchers were recruited through a local nongovernmental organization doing outreach work in the target population. In this methodology (Price & Hawkins, 2002), people from the target population are trained during a 5-day workshop to interview three peers in their network on three broad themes: daily life, risks and problems, and health. Responses are then reported back to research supervisors and in-depth interviews with the peer researchers are at the end of the fieldwork. The analysis is based on these in-depth interviews in February, 2007. A more detailed description of the process is found elsewhere (Collumbien et al., 2009).

Quantitative Survey

Between August and September, 2007, a bio-behavioural survey recruited a total of 814 MTSW in Rawalpindi and 104 MTSW in Abbotabad using respondent driven sampling (RDS) (Heckathorn, 1997). Initial recruits (diverse in terms of key characteristics) served as seeds for an expanding chain of referrals, with respondents from each wave referring respondents from subsequent waves. Monetary incentives were given. Incomplete collection of the RDS data meant that we were unable to adjust the sample proportions for network size or recruitment biases (Heckathorn, 2002).

Sex workers were interviewed at a fixed location by trained fieldworkers familiar with these groups, and data was entered onto personal digital assistants (PDAs). Clinical samples were collected from all participants, and tested in a centralized laboratory looking for evidence of

both current infections (syphilis, gonorrhoea, Chlamydia) and lifetime exposure to infection (herpes simplex virus 2, syphilis, HIV). All participants were offered on-the-spot presumptive treatment for STIs (gonorrhoea and Chlamydia), rapid point of care testing for syphilis and subsequent treatment if found to be reactive on this screening test, and referral to local voluntary testing and counselling facilities if they wished to know their HIV status (which, unlike all other infections, was tested on an anonymous basis owing to local ethical concerns). A more detailed description of the recruitment process and survey procedures can be found elsewhere (Hawkes et al., 2009). Ethical approval was obtained from the London School of Hygiene and Tropical Medicine Ethics Board in the UK, and from the Nai Zindagi Institutional Review Board in Pakistan. Statistical analysis was conducted using Stata v.10 (Stata Corp, College Station, Texas).

Characteristics and risk behaviors were compared for two groups of MTSW: those with IDU clients and those without. Pearson's χ^2 test was used for categorical variables, and t -tests with equal variance for continuous variables. Two outcome variables of risk reduction were analyzed: condom use at last sex with a client and ever used a condom in the last month. Predictors of these outcomes were explored using univariate and multivariate logistic regression. Socio-demographic variables, sexual and other risk factors, and knowledge and testing variables associated with the outcome in the univariate analyses were included in the model if significance level was $p \leq 0.2$. Predictors were removed from the final model when significance did not reach $p \leq 0.05$.

RESULTS

Qualitative Peer Ethnography Findings

Peer researchers frequently mentioned drug users when asked to distinguish the bad from the good clients. *Drug user* was found to be a broad term, encompassing men drinking alcohol or men smoking hash with only a minority injecting drugs.

(IDUs) are very few. Many of them (clients) smoke hash or drink alcohol. (*Khotki*)

Most of the people come to us after smoking hash or drinking alcohol. . . . The alcoholics have sex with us because they think that they will be committing sin if they go to their wives after drinking alcohol. (*Khotki*)

Sex workers emphasized that they generally avoid having sex with IDUs, although it is sometimes difficult to judge whether a client is under the influence of drugs before the sexual act. However, most IDUs could be recognized by their physical appearance and their "unpleasant smell." Some were entertained if they offered more money and they are usually asked to use a condom.

If he is an IDU and is not a *giryra* (lover), a *khotki* does not even want have a look on him . . . disease. Such people have deteriorated their health. (*Khotki*)

Yes because *teekamar* (IDU) are contaminated with the germs of the injection. (*Khotki*)

Some *Khotkis* perceived the increased risk of disease transmission (including HIV) from these clients. However, this did not seem to be a major reason for avoiding having sex with drug users. It was rather their smell and the fact that sex takes longer—thus increasing the risk of anal tears and cuts.

Actually the addicts can have sex for more time than the ordinary people so *khotkis* get hurt by that . . . a *khotki* can bear up to 15 minutes, any more than that is painful. (*Khotki*)

Other thing is that drug users insert penis from the back very roughly which result *khotkis* face many cuts and they need one week to heal up. (*Khotki*)

Interestingly, a recurrent reason for avoiding drug users and IDUs, in particular, is the fear that keeping their company will lead to their own addiction.

Our heart does not desire because we think that this person injects daily and if we start to remain in his company we might also become used to injecting. (*Khotki*)

They have sex with those with whom they have good relations. Otherwise if someone else says that he has injected and wants to have sex, the *khotkis* are fearful that they may also get addicted. There is an attraction in drugs. (*Khotki*)

Giryas (lovers or husbands) who were IDUs were mentioned especially regarding the risk of the sex worker's own addiction, either by keeping their company or because of abandonment.

If, for instance, my *giryas* (lover/husband) is a *teekemar* (IDU) and spends a lot of time with me, I will have to give him money for the injection if I love him, and then (if) he injects in my company and I have fair chance of starting injections myself and thus become addicted. (*Khotki*)

They became used to it in the company of their *giryas* because their *giryas* were drug users. *Giryas* then leave the *khotki* but the *khotki* cannot leave the drug. It becomes their habit. . . . First, they go to these sellers with *giryas* and later they go by themselves. (*Khotki*)

Yes and may be with the *giryas* in his love. . . . One of my *khotki* friend started injections because his *giryas* left him. (*Khotki*)

Dealing with heartache by using addictive substances was a recurring theme throughout the interviews, whether it was through the use of drinking alcohol, smoking hash, or injecting drugs. Although some sex workers may have started injecting, the opposite was also mentioned, as some IDUs started selling sex to meet the cost of their habit.

Sometime they (IDUs) think they cannot do any other work to earn for their drugs and that they think that this (selling sex) is easy way of getting money. Normal boys also start selling sex because of the drugs. (*Khotki*)

Quantitative Survey Findings

Very few MTSW (12/896) reported to be injecting drugs themselves. Only 7 out of 910 (< 1%) reported having a *giryas* (husband or lover) who injected in the last year. However, 13% reported regular clients as injectors and a further 12% reported IDUs among their other clients. A further 5% (42/905) reported IDUs among nonpaying partners and 4 had sex with a female IDU in the last year. Although a total of 23% (202/887) have IDUs among their partners, nearly all—22% (193/889)—reported them as clients (regular and/or nonregular). The analysis in this article will focus on looking at how MTSW with IDU clients differ from those who do not have IDUs among their clients and the effect on condom use.

Table 1 summarizes characteristics and risk practices of MTSW comparing those who sold sex to IDU clients in the last year to those who did not. There were relatively fewer *banthas* (male sex workers with a masculine identity) among the sex workers who reported IDU clients, but the difference was not significant. Clients in Abbottabad were less likely to include IDUs (7% vs. 13%). The two groups did not differ in terms of age, marital status, or having children. More MTSW with IDU clients were living in a *daira* (i.e., a home where mainly *khusras* live and sell sex) with other sex workers (41%), than those without IDU clients (27%).

In terms of sexual risk factors, both groups reported similar duration in sex work and number of clients in the last week (mean 4.9 with SD 4.6 and 4.2 respectively for those with and without clients). MTSW who entertained IDU clients were significantly more likely to smoke hash (46%) and drink alcohol (67%) than those without IDU clients (with 33% smoking and 44% drinking). Very few sex workers injected themselves and the difference between the two groups (3% vs. 1%) was not significant.

TABLE 1. Comparison of Characteristics and Risk Behaviors of Two Groups of Male and Transgender Sex Workers: Those With and Without Injecting Drug Users (IDU) Among Their Clients

Characteristic	Has IDU Clients		Has No IDU Clients		χ^2 or <i>t</i> -Test	<i>p</i> Value
	No/Total	%*	No/Total	%*		
Socio demographics						
Gender						
Bantha (male)	46/192	24.0	214/694	30.8		
Khotki (feminised male)	83/192	43.2	281/694	40.5		
Khusra (transgender)	63/192	32.8	199/694	28.7	3.570	0.168
City						
Rawalpindi	180/193	93.3	609/696	87.5		
Abbottabad	13/193	6.7	87/696	12.5	5.029	0.025
Age		24.3 (6.4)		23.8 (6.0)	-0.852	0.394
Years of schooling		3.4 (3.6)		4.2 (4.1)	2.250	0.025
Currently married	35/189	18.5	96/693	13.9	2.556	0.110
Has children	30/193	15.5	80/696	11.5	2.286	0.132
Residence						
At daira	78/192	40.6	184/692	26.6		
With family	96/192	50.0	416/692	60.1		
Other	18/192	9.4	92/692	13.3	14.501	0.001
Sexual and other risk factors						
Years of sexwork		9.6 (5.6)		9.0 (5.8)	-1.282	0.200
Number of clients in last week		4.9 (4.6)		4.9 (4.2)	0.154	0.878
Injected drugs in past year	5/193	2.6	7/696	1.0	2.850	0.091
Smoked hash in the last month	89/193	46.1	229/696	32.9	11.480	0.001
Drank alcohol in the last month	129/193	66.8	303/696	43.5	32.852	0.000
Risk reduction						
Condom use at last sex with client	68/193	35.2	179/696	25.7	6.8176	0.009
Used condom in last month	118/162	72.8	330/637	48.2	31.506	0.000
Knowledge and testing						
Ever heard of HIV or AIDS?	41/193	21.2	288/694	41.5	26.551	0.000
Knows can get HIV from sharing needles/syringes	38/193	19.7	272/696	39.1	25.018	0.000
Knows can get HIV from unprotected sex	39/193	20.2	283/696	40.7	27.364	0.000
Ever had an HIV test?	14/193	7.3	44/696	6.3	0.215	0.643
Ever had an HCV test?	7/191	3.7	19/692	2.7	0.443	0.506

*or mean (standard deviation) for continuous variables.

Sex workers with IDU clients scored significantly higher on risk reduction measures, with 35% having used a condom at last sex with a client (vs. 26%), and 73% either sometimes or always used condoms (vs. 48% amongst those with no IDU clients). This is despite levels of knowledge of HIV/AIDS and its transmission being extremely low in both groups. Knowledge levels among those with IDU clients were half those among MTSW without IDU clients (21% vs. 42% for ever having heard of HIV, and similar levels and differentials for transmission through needles and syringes, as well as through unprotected sex). Sexual health protection measures were low, and health care seeking patterns re-

flected this: seeking HIV tests was uncommon (7% vs. 6%), as was testing for HCV (4% vs. 3%).

Despite low levels of knowledge regarding HIV transmission risks, having IDU clients seems an important predictor of condom use. Tables 2 and 3 give more detail on all factors influencing condom use at last sex with clients, and on ever using in the last month (either *always* or *sometimes* vs. *never*), respectively. Only variables kept in the final model are included in the tables, showing proportion of users among the subgroups with crude and adjusted odds ratios.

Awareness of HIV is the most important predictor of condom use at last sex, as MTSW

TABLE 2. Summary of Predictors of Condom Use at Last Sex: Univariate and Multivariate Analysis

	No/Total	% Users ^a	<i>p</i> Value ^b	Unadjusted Model		Adjusted Model		<i>p</i> Value ^e
				OR ^c	95% CI	OR	95% CI ^d	
IDU among clients								
No	179/696	25.7%		1.00		1.00		
Yes	68/193	35.2%	0.009	1.57	1.12–2.21	1.75	1.2–2.56	0.003
Age		23.2 (5.5)	0.026	0.97	0.95–1.00	0.97	0.95–1	0.049
Number of clients in last week		4.3 (3.4)	0.004	0.94	0.9–0.98	0.93	0.88–0.97	0.001
Drank alcohol in the last month								
No	103/463	22.2%		1.00		1.00		
Yes	144/433	33.3%	0.000	1.74	1.29–2.34	1.89	1.37–2.61	0.000
Ever heard of HIV or AIDS?								
No	119/575	20.7%		1.00		1.00		
Yes	126/337	37.4%	0.000	2.29	1.7–3.09	2.48	1.76–3.51	0.000
Ever had an HIV test?								
No	216/859	25.1%		1.00		1.00		
Yes	31/59	52.5%	0.000	3.30	1.93–5.62	2.28	1.22–4.23	0.009

^a or mean (standard deviation) for continuous variables. ^b *p* value derived from Chi squared test or from *t*-test for continuous for age and number of clients. ^cOR = Odds ratio. ^d95% CI = 95% confidence interval. ^e *p* value derived from Wald test.

TABLE 3. Summary of Predictors of Condom Use in the Last Month: Univariate and Multivariate Analysis

	No/Total	% Users ^a	<i>p</i> Value ^b	Unadjusted Model		Adjusted Model		<i>p</i> Value ^e
				OR ^c	95% CI	OR	95% CI ^d	
IDU among clients								
No	307/637	48.2%		1.00		1.00		
Yes	118/162	72.8%	0.000	2.88	1.97–4.21	2.92	1.95–4.36	0.000
City								
Rawalpindi	382/719	53.1%		1.00		1.00		
Abbottabad	43/100	43.0%	0.057	0.67	0.44–1.02	0.59	0.36–0.95	0.029
Age (SD)		23.4 (5.5)	0.070	0.98	0.96–1.00	0.96	0.94–0.99	0.004
Currently married								
No	343/691	49.6%		1.00		1.00		
Yes	78/123	63.4%	0.005	1.76	1.18–2.61	2.35	1.48–3.73	0.000
Drank alcohol in the last month								
No	226/490	46.1%		1.00		1.00		
Yes	197/326	60.4%	0.000	1.78	1.34–2.35	1.63	1.2–2.22	0.002
Ever heard of HIV or AIDS?								
No	385/763	50.5%		1.00		1.00		
Yes	40/56	71.4%	0.002	1.78	1.34–2.37	2.42	1.76–3.33	0.000

^a or mean (standard deviation) for continuous variables. ^b *p* value derived from Chi squared test or from *T* test for continuous for age and number of clients. ^cOR = Odds ratio. ^d95% CI = 95% confidence interval. ^e *p* value derived from Wald test.

who had ever heard of HIV/AIDS have a 2.5 times higher odds of using one. Although very few sex workers ever went for HIV testing, those who did were 2.3 times more likely to use condoms. Condom use was higher among those who reported drinking alcohol

in the last month (adjusted OR = 1.9). After adjusting for other factors, having IDUs as clients represented a 75% higher odd of condom use. Condom use decreased with age and with the total number of clients in the past week.

The univariate and multivariable analysis shows that having had IDU clients in the last year is the most important predictor of condom use in the last month (Table 3), as it increased the odds by a factor of nearly 3 times (adjusted OR = 2.9). Awareness of HIV had, again, an important effect on condom use (adjusted OR = 2.4), as well as alcohol, as it also increased the likelihood of condom use. Age was, again, negatively correlated with use, but currently married sex workers were more likely to protect their client contacts with the use of condoms (adjusted OR = 2.35). Lastly, condom use was significantly lower among sex workers in Abbottabad than Rawalpindi (adjusted OR = 0.6).

Discussion

Few studies have investigated the networking between IDUs and MTSW in low-income settings, and in South Asia in particular. In this study setting in one major city and one smaller city in northern Pakistan, we have established that sexual networking between MTSW and IDUs is important, and a main transmission route between these high-risk groups. Our study indicates that the overlap between these groups is focused more on sexual networking than on drug networking. More than a fifth (22%) of MTSW reported that they had IDUs among their sexual clients in the past year. For some sex workers, the fear of drug addiction led them to avoid the company of IDUs—this, and other strategies, may have worked: less than 1% of sex workers reported injecting drugs in the past year (among those with IDU clients, it was higher at 3%, but this was not a significant difference). Based on data collected among the IDUs in the same study, less than 2% of IDUs in Rawalpindi and Abbottabad had ever sold sex (Platt et al., 2009), 18% of IDUs reported sex with MTSW in the last year (Mayhew et al., 2009).

According to the MTSW who participated in the peer research, the risk potential of infection with HIV was either not made, or simply not a persuasive enough argument for taking measures to reduce their risks. However, MTSW consistently reported on their perceptions of IDUs as “unhygienic” and/or having an “unpleasant smell”—factors that may have motivated higher

use of condoms among those with IDU clients as use in the last month was 3 times the odds of use among MTSW without IDU clients. Levels of HIV knowledge were extremely low in this survey, given that we are now 25 years into this global epidemic. Of particular concern is the finding that among those MTSW who reported IDU clients, only 21% had any knowledge of HIV—a figure that is one-half that of the MTSW who did not report sex with IDUs. It might be hypothesised that those MTSW who have more knowledge about HIV and its transmission select not to have sex with IDUs—but this finding needs more exploration in further research.

Despite the low levels of HIV knowledge, the MTSW who reported sex with IDUs were more likely to also report higher levels of condom use—this may reflect the general avoidance of IDUs because of poor hygiene. Although this deserves further exploration, it should be remembered that overall patterns of condom use were extremely low in all groups, and certainly not sufficient to consistently prevent an HIV epidemic. To ensure that HIV transmission is greatly reduced, rates of condom use during sex work must be consistently greater than 50% (Guinness et al., 2005; Jana & Banerjee, 1997). The frequently mentioned fact during the qualitative research that drug users take longer to climax may make condom use harder to promote, yet lubricants may provide a solution.

The findings of the multivariable analysis clearly show that knowledge of HIV is currently a very important predictor of condom use. Although this may not be, necessarily, surprising, it is an important message in this context, where this group of sex workers have, so far, been largely unreached with risk reduction messages. As part of the overall larger study conducted on groups at risk of HIV and STI in Rawalpindi and Abbottabad, the political feasibility and likely societal acceptability of the technical recommendations arising from the study were analysed (Buse, Lalji, Imran, Mayhew, & Hawkes, 2009). Key stakeholders, including legislators and human rights activists, thought that proposed interventions (including promotion of comprehensive sexual health services) with MTSW would resonate least with society, and be the most

difficult to explain to the wider (voting) public (Buse et al., 2009). This finding carries important implications for risk reduction activities among MTSW in Pakistan.

The incomplete collection of the RDS data precluding the adjustments for network sizes and recruitment biases is a limitation in this study. As with other nonprobability sampling methods, modified RDS is subject to potential biases and reduced generalizability of the findings. Even if we cannot claim to have obtained population estimates of MTSW characteristics, it would be unlikely that any adjustments would invalidate the associations reported in this paper.

CONCLUSIONS

Our study has highlighted the importance of understanding the multiple risks faced by MTSW in Pakistan. We have previously shown that the high level of their risk, combined with low level of knowledge, results in high levels of poor sexual health outcomes (including syphilis and other sexually transmitted infections; Hawkes et al., 2009), and is exacerbated by their environment and stigmatized position within society. In this article, we have identified one further contributing factor to their health risks—the extent of their sexual networking with other risk groups. We have shown that over one-fifth of MTSW have sex with IDU clients. This key finding highlights the need for integrated approaches to risk reduction programs among MTSW and IDUs in Pakistan. These groups do not live in isolated communities, but, instead, have significant levels of sexual networking with each other.

Although political analysis (Buse et al., 2009) has shown that harm reduction interventions with IDUs may be more politically acceptable than provision of comprehensive sexual health care for MTSW, our analysis has shown that isolated interventions with single-risk groups is unlikely to be sufficient to control the spread of the epidemic in Pakistan. Recognizing the multiple risks faced by MTSW and IDUs means ensuring provision of scaled up known to be effective and accessible interventions for all people at risk.

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