

Protecting the unprotected: mixed-method research on drug use, sex work and rights in Pakistan's fight against HIV/AIDS

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Abstract

Objectives: To investigate the nature and extent of human rights abuses against three vulnerable groups (injecting drug users (IDUs) and male and female sex workers), to understand the social and sexual linkages between them and to examine how protecting their rights could enhance the impact of HIV prevention policies.

Methods: In-depth interviews were carried out with 38 high-risk respondents (IDUs and female, male and transgender sex workers) and a bio-behavioural survey was performed of 813 IDU/sex worker respondents in Rawalpindi.

Results: People in all vulnerable groups interacted both sexually and socially. All groups experienced human rights abuses by state and non-state actors which increased their HIV risk. Non-state actors, including relations and sex worker clients, are responsible for verbal, physical and sexual violence. State actors (particularly police) perpetrate harassment, exploitation and abuse of all vulnerable groups with impunity. Health service providers fail to provide adequate services for vulnerable groups.

Conclusions: High levels of discrimination and abuse of human dignity of all groups studied were revealed. This violates their physical and mental integrity and also leads to an increased risk of HIV. The sexual and social interactions between groups mean that human rights abuses experienced by one high-risk group can increase the risk of HIV both for them and other groups. The protection of human rights needs to become an integral part of a multisector response to the risk of HIV/AIDS by state and non-state agencies. The Government of Pakistan should work at both legal and programme levels to protect the rights of, and minimise discrimination against, groups vulnerable to HIV in order to reduce the potential for the spread of HIV

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before the epidemic takes hold.

Introduction

Pakistan has signed, ratified or is bound by a range of international treaties that enshrine fundamental human rights including, in April 2008, the International Covenant on Civil and Political Rights and the UN Convention Against Torture (both signed but not yet ratified). Although these protect the human rights of all citizens, they do not offer specific protection that may be necessary to groups vulnerable to multiple forms of discrimination. Despite periods of democracy, Pakistan is an authoritarian Islamic republic with conservative social values, particularly on issues of sex. Its governance is poor and state authorities such as the police have a history of corruption.¹ The National AIDS Control Programme in Pakistan receives substantial donor funding but lacks capacity.² While there is an HIV Treatment and Prevention Act, the guiding 2007 policy and accompanying strategic framework on the country's programmatic response to HIV/AIDS have yet to be approved by the Ministry of Health.³⁻⁵ Dedicated services for risk groups are limited and are largely run by nongovernmental officers (NGOs) or privately.

Sporadic national level discussions of HIV/AIDS have done little to garner popular understanding or sympathy of the disease, particularly since it is associated with groups at the margins of society. Quite aside from any HIV links, vulnerable groups such as injecting drug users (IDUs) and sex workers face high levels of discrimination and contempt from society in general and are subject to harassment and incarceration by the authorities.^{6,7} As in other Asian countries, discrimination and abuse of IDUs and sex workers (including physical and sexual violence from state authorities) risks pushing them into higher risk behaviour, including making them reluctant to attend needle exchange or condom promotion programmes for fear of being identified.⁷⁻¹⁰

The rights abuses faced by vulnerable groups and the link to an increased risk of HIV are underresearched. A large literature has developed over the past decade on the rights of people with HIV in general^{11,12} and on the

role of institutions and their structures in increasing the risk of HIV.¹³ There is a specific literature on the legality of sex work and the impact of legal structures on sex work, although this tends to deal with broader "rights" of sex workers rather than specifically the risk of HIV and much of it is from the West,¹⁴⁻¹⁶ although there are some important Indian examples.^{17,18} Similarly, much literature on drug use, law enforcement and structural abuses of rights is from western democracies and Eastern European former Soviet states,^{19,20} although there is an important HIV/rights-related literature from Thailand and some other south-east Asian states.^{7-9,21} The Pakistan-specific literature, however, either deals with civil and political rights abuses (Amnesty International and Human Rights Watch Reports), which rarely include HIV-related rights or abuses faced by vulnerable groups, or deals with HIV from clinical and public health perspectives. The interface between rights abuses and the risk of HIV in Pakistan has not been investigated.

Non-therapeutic drug use, prostitution, homosexuality and adultery are illegal in Pakistan and carry severe penalties,⁶ yet Pakistan has one of the highest recorded rates of injecting drug use in the world and widespread sexual risk behaviour among vulnerable groups.^{10,22,23} Currently Pakistan's AIDS epidemic is "concentrated" among specific risk groups (especially drug users), but the very low levels of HIV/AIDS awareness and condom use in Pakistan, together with high-risk sexual behaviours in already vulnerable groups, make it a potentially high-risk country for HIV spread.²³⁻²⁵ Indeed, there are signs that this may have begun, with high levels of HIV found among IDUs in several cities in 2007.²⁶

There is increasing consensus that public health interventions are most effective if they also respect, protect and fulfil the rights of the people with whom they are concerned.^{6,27} In Pakistan, specific behaviours are the focus of the HIV/AIDS policy, but the rights of groups most likely to have these risk behaviours (sex workers, IDUs) are not specifically protected in law. We conducted qualitative and quantitative research with IDUs and male, female and transgender sex workers in order to: (1) investigate the nature and extent of human rights abuses against these three groups; (2) understand the social and sexual linkages between them; and (3) examine how protecting their rights could enhance the impact of HIV prevention policies. After briefly describing the links between the vulnerable groups and their STI/HIV infection rates, this paper discusses the human rights violations experienced by

all groups, how these may affect their HIV risk and how the rights of these groups could be better protected.

Methods

Qualitative research informed the development of a quantitative survey; results from both are presented here. The methods for these have been described in detail in accompanying papers in this issue.^{28,29}

The qualitative component used the Peer Ethnographic and Evaluation Research (PEER) techniques. PEER has many advantages for obtaining information from sensitive hard-to-reach groups.³⁰ It involves a long process of rapport building with the target populations from whom "peer researchers" were selected and trained. Access to the target groups was through a local NGO in Rawalpindi and selection of 60 peer researchers (15 each from transgender sex workers (TGs), male sex workers (MSWs), female sex workers (FSWs) and IDUs) was purposive; all peer researchers were Pakistani nationals. Initial training workshops in December 2006 worked with peers to identify key topic areas to investigate, develop a visual topic guide (since most were illiterate) and teach the peer researchers how to discuss these topics with their peers. Each researcher conducted three interviews with three peers and reported back to a field officer. After this, the peer researchers themselves were interviewed in depth by the main research team in January 2007, after obtaining their informed consent. These interviews were conducted in Urdu/Punjabi, recorded, transcribed verbatim and then translated into English from the verbatim transcription. The PEER process built trust and gave insights into the complexities of gendered and sexual identities as well as the nature and scale of abuses suffered by these groups, which would not have been identified through in-depth interviews alone.²⁸ The software Atlas-ti was used for data management, with transcripts coded under each main theme with subsequent subthemes identified and mapped into Excel spreadsheets to aid analysis across themes and respondents.

The quantitative survey built on the qualitative findings, refining its questions and sequencing to collect data on risk behaviours, prevalence of rights abuses and biological markers of sexually transmitted infections and HIV.²⁹ Between August and September 2007 we conducted a cross-sectional survey of IDUs recruited from non-treatment settings in Rawalpindi and Abbottabad using "respondent driven sampling".³¹ Interviews took place in a rented house using hand-held palm pilots (Hewlett Packard) administered by people

with extensive experience of working with each of the vulnerable groups. In addition, urine and blood samples were collected from all participants. This paper only reports findings from Rawalpindi, since this is where our qualitative data are from. Data collection took place in August and September 2007. Data were analysed using STATA Version 10.

Results

Of the 60 peer interviewers who conducted interviews with their peers, we interviewed and recorded a total of 38 and these in-depth interviews are used in this paper. The quantitative survey was conducted in 302 IDUs, 426 FSWs, 560 MSWs (195 Banthas, 365 Khotkis) and 253 TGs (Khusras) in Rawalpindi. Banthas and Khotkis are both MSWs, but Khotkis are feminised men, sometimes taking female dress. Khusras are TGs, biological men who identify as female and describe themselves as having a female "soul".²⁸

Networking between vulnerable groups:

Both qualitative and quantitative findings revealed sexual and social networking between people in each of the high-risk groups. "Sexual networks" refers to "a set of people who are linked directly or indirectly through sexual contact".³² People often become part of sexual networks through their social networks and activities. Table-1 summarises the survey data on the extent of sexual and drug-related links between the groups.

Qualitative data showed the nature of these links. Clients were shared between MSWs and FSWs and IDUs pimped for sex workers as well as using them. IDUs

Table-1: Sexual and drug links between risk groups.

Type of link	Number asked†	Percentage reporting
Sex with drug users		
FSWs reporting IDUs as clients in last year	394	20.3
Banthas reporting IDUs as clients in last year	187	21.4
Khotkis reporting IDUs as clients in last year	360	22.2
Khusras reporting IDUs as clients in last year	246	24.4
IDUs reporting sex with TG/MSW* in last year	301	18.3
IDUs reporting sex with FSW in last year	301	23.9
Married FSWs reporting husband injected drugs in last year	366	32.2
FSWs reporting lovers who inject drugs	58	22.4
Khotkis reporting IDUs as husband/lover in last year	360	0.3
Khusras reporting IDUs as husband/lover in last year	253	1.6
Drug-taking and sharing needles		
FSWs injecting drugs in last year	428	3.0
Banthas injecting drugs in last year	190	1.1
Khotkis injecting drugs in last year	360	0.6
Khusras injecting drugs in last year	248	0
IDU reporting sharing needle/syringe with sex worker in the last week	302	8.6
IDU reporting sharing needle/syringe with sex worker last time they shared	302	6.8

FSW: Female sex worker; IDU: Injecting drug user; TG/MSW: Transgender/male sex worker.

*Qualitative data showed that categorisation by IDUs of TGs vs MSWs was unreliable so the categories have been merged here.

†Question skips in the questionnaire result in different numbers for the different questions.

reported particular emotional attachment to MSWs with whom they developed "husband" or "lover" type relationships, although this was downplayed by the MSWs who reported them simply as "clients". While only

Table-2: Percentage of sex workers reporting abuse in the last year by category of perpetrator and type of Abuse.

Perpetrator of violence and type of sex worker	Nature of abuse			
	Verbal abuse	Physical abuse	Sexual abuse	Pimped against their will
Clients				
FSWs (n=427)	49.9	40.8	22.2	-
Khusra (n=251)	57.8	35.7	28.2	-
Khotki (n=363)	56.1	44.3	28.3	-
Bantha (n=197)	44.2	25.8	11.1	-
Neighbours				
FSW (n=427)	44.1	25.1	13.8	-
Khusra (n=251)	40.6	9.9	19.8	-
Khotki (n=363)	27.2	11.9	8.0	-
Bantha (n=197)	18.8	5.1	8.1	-
Husbands				
FSW (n=427)	64.2	64.4	30.9	43
Lovers/favourite client*				
FSW (n=427)	52.5	11.9	50.9	47.5

FSW, female sex worker.

*Clients with whom they have an emotional relationship and who pay on a monthly basis.

Table-3: Percentage of sex workers reporting harassment and violence by state actors: Rawalpindi.

	Bantha	Khotki	Khusras	FSWs
In last 12 months	n=198	n=363	n=252	n=427
Verbal abuse by police	32.3	43.4	59.1	10.1
Beaten by the police	25.8	44.4	35.7	4.2
Sexually assaulted by police	11.1	28.3	28.2	7.3
Gave free sex to police	31.3	34.3	41.7	40.9
You bribed the police	25.3	49.7	55.8	61.2
Ever (lifetime)	n=198	n=363	n=252	n=427
Ever been arrested	6.6	19.0	21.8	4.2
Ever been in prison	1.5	2.5	2.0	4.0
Of those ever in prison	n=3	n=9	n=5	n=17
Ever raped while in prison	0.0	55.6	40.0	58.8

a few sex workers injected drugs themselves, many reported sexual relations with drugs users (Table-1).

Abuse by non-state actors:

Both qualitative and quantitative data show that all groups experience widespread abuse from clients and people in their neighbourhood. For FSWs, their husbands were the most frequent perpetrator, followed by clients. Among TG/MSWs, abuse increases the more feminised the category of sex worker: Khusras experience most and Banthas the least. For all sex workers the nature of abuse ranges from verbal abuse to physical beatings, sexual assault and rape (Table 2).

Qualitative data showed that all sex workers experienced abuse from clients. Sex workers described "bad clients" as those perpetrating abuse: physical abuse (burning with cigarettes), refusing to use condoms, engaging in practices that increased the likelihood of tears and wounds (forced anal sex, taking a long time to ejaculate - especially drug users) or bringing multiple other clients (usually unpaid). By contrast, "a good client is the one who gives respect" (Khotki 8).

The qualitative data also showed that, aside from clients' abuse, Khotkis felt their rights to function as part of a family and be respected in society were widely violated; some even indicated it was family rejection that pushed them into sex work. In particular, interviews revealed the importance of public respect and how humiliating sex workers found public abuse: "We cannot get jobs, our brothers are preferred over us in the family ... He [Khotkis] is ignored in the family, he cannot go to weddings, and everybody stares at him. He is always frightened of being disgraced in the public" (Khotki 2).

FSWs, by contrast, though fearful of their wider family finding out, did not talk about it as a violation of their rights, perhaps because their comparative wealth secured their material needs and with it a perceived respect among family and neighbours.

IDUs reported more verbal and psychological abuse than sexual or physical and expressed similar concerns to Khotkis about discrimination from family and society: "For example, IDU's sister is getting married then his family members will ask him to stay away from other guests in the function so that the others might not get the impression that the bride's brother is an IDU ... He feels - I cannot express his feelings in words; he sheds blood tears ..." (IDU 11). Among IDUs there was a strong tendency to self-blame: "[An IDU] is deprived of many rights because of his own mistakes." (IDU 3). Many faced severe ostracism, including lack of trust from their families even if they try to stop injecting drugs, which led to widespread mental health problems manifest in feelings of extreme self-hate and a deepening of addiction in an attempt to escape: "I refrained from taking drugs for two years but still my family members didn't believe me. Then I got tired and tried to hang myself three times." (IDU 2).

Abuse by state actors:

Most disturbing in both qualitative and survey findings was the extent of abuse and complicity by state actors, particularly police (Table-3). Qualitative interviews showed that all sex worker groups were exploited by police who played on their fear of exposure or raids to negotiate bribes of money or free sex from the sex workers and their managers: "[we] either provide free sex to the policemen or give some weekly or monthly amount." (Khotki 11). "[Police say] give us a nice girl and then do as much business as you want ..." (FSW 1). Table 3 shows that 25-61% of sex workers gave bribes while

31-41% gave free sex. The relationships with police were complex, however, and FSWs in particular seemed adept at negotiating strategically useful relationships.

Table-3 shows that verbal and physical abuse by police is highest against Kushras and Khotkis. The qualitative narratives also suggested that their feminised identity provokes particular vindictiveness by police: "Once a policeman got hold of a Khotki and asked him where he had gone ... The policeman asked him repeatedly and every time the Khotki replied by using the word "she" for himself, the policeman got infuriated and beat him up. After beating him up, the policeman asked the same questions and the Khotki now realised why he was beaten up and this time he used the word "he" for himself and only then the policeman let him go." (Bantha 1).

The IDUs were the most powerless group with no wealth, little autonomy and therefore little possibility of placating the police. Between 10-20% of IDUs in the survey (n=301) had surrendered injecting equipment or drugs the last time they were stopped by police and 40% had given money; 20% had ever been arrested and 14% imprisoned. The qualitative interviews showed the extreme lengths to which some would go to avoid arrest and incarceration: "Sometimes they [IDUs] would cut themselves with some blade ... near their neck. This scares the policemen that they might get into trouble because of him so they let him go." (IDU 2).

Discrimination and degrading treatment in health service delivery:

Discrimination by health providers spans both state actors (public sector) and non-state actors (private/traditional sectors). All groups showed a reluctance to seek health care from public sector services, and interview respondents indicated that private sector providers generally treated them better because they were paying for the service. The survey data indicate that respondents prefer to seek care from private practitioners, and more especially from traditional healers or friends. Only 32% of FSWs and 25% of MSWs/TGs sought care from allopathic facilities.

For all groups, fear of ill treatment and exposure appeared to constitute a major barrier to accessing care (including treatment for sexually transmitted infections and drug treatments). Although rudeness, humiliation or abuse were reported by only a minority of respondents in the survey data (where it was reported, it was primarily at public sector facilities), the qualitative data revealed that allopathic care was not sought by preference for fear of exposure and

discrimination. For IDUs, the fear expressed in the interviews seemed to be driven by experiences of immediate discrimination, particularly of poorer IDUs who look dirty and are clearly labelled as "drug users" by hospital staff who treat them with suspicion (since some try to steal syringes and drugs) and derision.

IDUs with little disposable income rarely sought private care except when family or friends helped them to access private detoxification centres. The survey data showed that 20% of IDUs (n=60) had used detoxification services and qualitative interviews revealed the nature of treatment, abuse and sometimes outright brutality and humiliation they faced: "They make them open the gutters and also beat them up. They shave their heads and eyebrows...he is punished when he sometimes speaks loud or gets into a verbal quarrel. Other than that, they tie him up with a chain the way a dog is tied up so that he cannot move." (IDU 2).

The shaving of hair and eyebrows was taken as a particular insult and several talked of being chained up (in the survey 20% those who had ever used detoxification had been chained). Many of the IDUs interviewed were indignant that these centres were run as businesses that were more interested in making money than curing the IDUs, and it seemed to be quite easy to obtain drugs while inside; not surprisingly, therefore, 40% of users of detoxification centres in the survey said that their drug use had not reduced when they came out. No rehabilitation services appeared to be offered.

Qualitative data also revealed barriers to accessing preventive care, particularly condoms and clean needles. Again stigma and discrimination play a role, with shopkeepers either refusing to sell items or stigmatising the buyer so that they are reluctant to come.

Discussion

Our findings show that the vulnerable groups in the study are interlinked through social and sexual contact. Referral of clients across groups is extensive, but data are lacking from clients themselves to establish how often or what percentage of clients would patronise several groups of sex workers (a phenomenon that has been documented in India).³³ Nevertheless, there is sexual contact between the groups and their clients so an HIV risk in one group can affect another group, making the protection of all vulnerable groups necessary to achieve the government's public health goals on HIV/AIDS.

This research has revealed high levels of abuse of human dignity of all vulnerable groups studied. This was manifest in a range of verbal, physical and sexual abuse perpetrated by families, neighbours, police and prison authorities. The abuse faced by these groups is not only a violation of their physical and mental integrity, but may also lead to increased risk of HIV—for example, sex workers experienced physical and sexual abuse that increased the risk of tears and wounds to the vaginal or anal tracts. For IDUs the biggest HIV risk is sharing of needles and syringes. Police confiscation of their injecting equipment or drugs increases the likelihood that IDUs have to share needles/syringes.^{34,35}

For all groups, access to health care was curtailed by their experiences or fear of discrimination, particularly by public sector providers and private detoxification facility staff. This means that vulnerable groups are denied information and services that could help protect them. Non-state sector actors like NGOs and private sector groups have become increasingly responsible for providing health services, but systems to ensure their medical standards and rights-related accountability have not been commensurately introduced.^{36,37} For IDUs, in particular, the absolute dearth of drug treatment programmes is seen by some as fuelling the seroprevalence of HIV in drug users across south-east Asia.³⁸

Of particular concern is the abuse of power by police. The illegal status of prostitution and non-therapeutic drug use in Pakistan allows the police to capitalise on their position of power, intimidating all vulnerable groups (with threats of exposure, arrest or property confiscation) to secure regular bribes or sexual favours. The relatively small number of survey respondents reporting they had been in jail can be explained by qualitative data which showed attempts to placate police and build protective relationships with them, thus avoiding arrest. This strategy seemed effective for the FSWs, who charge more when selling sex, in terms of minimising police sexual/physical abuse or arrest in the short term, although it is an uncertain relationship. For Khotkis and Kushras at the lowest price end of the sex market, however, bribes seemed insufficient to stop high levels of police violence against them. This may be fuelled by the tendency of police and others to replicate "the structures of gender inequality ... through the stigmatisation of effeminate homosexual men and transgendered persons who ... are frequently subject to socially sanctioned physical violence."³⁸

There are many challenges to protecting the rights of

these vulnerable groups in Pakistan. First, these people are engaged in activities that are outside the law, making their protection particularly difficult. People engaged in prostitution, nontherapeutic drug use and same sex activities are not protected in the Constitution. Some protection may be possible under the 2002 Police Order which prohibits police from "inflicting torture or using violence on any person in their custody" (Section 156),³⁹ but our data show that the majority of people develop means to avoid arrest and detention and most abuse happens outside prisons and police cells. Police exploit vulnerable groups engaged in illegal activities with impunity and few complaints are made against the police in the courts.⁴⁰

Second, although Pakistan took a major step forward in April 2008 by signing the two most powerful treaties that could protect its citizens against abuse, particularly from state actors—namely, the International Covenant on Civil and Political Rights (ICCPR) and the Convention Against Torture (CAT)—it has not yet ratified them. Thus, a major recommendation is that the newly formed Government of Pakistan proceeds to immediate ratification of the ICCPR and CAT. This would ensure gaps in national law are filled and enable the Pakistan Courts to protect the rights of vulnerable groups and so help safeguard public health. Even without the ratification, role models already exist for creating the space necessary to ensure protection of the vulnerable. Singh et al²⁷ have documented how in India, despite the "right to health" not being explicitly written into national laws, "[the] judiciary is using creative reasoning to force the government to fulfil this right". In South Africa and Latin America, challenges to the human rights provisions in national constitutions have also led to interpretations in favour of public health and prompted reforms even where international treaties

Take-home messages

- ▶ The health and human rights needs of groups at high risk of HIV in Pakistan have been neglected and are not protected in law.
- ▶ Drug users and sex workers face multiple human rights abuses by state and non-state actors that violate their basic rights and increase their risk of HIV.
- ▶ The National AIDS Control Programme should improve access to sexual health and drug treatment services and promote a multisector response to tackle the risk of HIV and protect rights.
- ▶ Legal changes must be encouraged to protect the rights of vulnerable groups—specifically, the Pakistan Government should immediately ratify the ICCPR and CAT treaties.

have not been ratified.^{27,37} Pakistan has ratified the ICESCR (enshrining the right to health), and we have demonstrated the considerable public health importance of safeguarding the health of groups vulnerable to HIV infection. Their rights must now be taken up by local lawyers, legal and rights groups to bring creative challenges through the judiciary to ensure the government adequately protects their health and dignity.

The third challenge is to promote sufficient government understanding to (1) support interventions to improve access to and quality of services for vulnerable groups; (2) address cultural and social stigma essential for protecting dignity and autonomy;⁴¹ and (3) openly acknowledge the role of police in increasing the risk of HIV and work with them to reduce this risk. As our data indicate, there are sound public health reasons for supporting such actions; civil society organisations, members of the judiciary and the government must now take responsibility for acting on the public health evidence. However, our political analysis has highlighted the likely obstacles which will be faced in trying to implement some of these activities.⁴²

Action must be taken at both legal and programme levels to protect the rights of-and minimise discrimination against- groups vulnerable to HIV if the Government of Pakistan is to effectively achieve its public health goals to reduce the potential for HIV spread before the epidemic takes hold.

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Competing interests:

None.

Ethics approval:

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Contributors:

SHM designed the "rights" component of the research, participated in fieldwork, led the data analysis of the rights theme and led the writing of the paper. MC contributed to the study design, fieldwork and data analysis and provided detailed comments on the paper. AQ participated in fieldwork and data analysis and provided detailed comments on the paper. LP contributed to the design of the quantitative survey and quantitative data analysis and provided comments on the paper. NR participated in qualitative fieldwork and data analysis and provided comments on the paper. AF commented on the study design and provided comments on the paper. NL contributed to the study design, facilitated fieldwork, contributed to data analysis and commented on the paper. SH was the lead investigator for the overall project, contributed to the rights component of the study and provided comments on the paper.

References

1. Transparency International. Transparency International Corruption Perceptions Index 2008. http://www.transparency.org/policy_research/surveys_indices/cpi/2008 (accessed 13 Nov 2008).
2. Khan OA, Hyder AA. Responses to an emerging threat: HIV policy in Pakistan. *Health Policy and Planning* 2001;16:214-8.
3. National AIDS Control Programme, Government of Pakistan. The HIV and AIDS Prevention and Treatment Act, 2007 (draft). <http://www.nacp.gov.pk/pakistan-hivaids-law> (accessed 14 Sep 2008).
4. Ministry of Health, Government of Pakistan. National HIV and AIDS Policy - final draft, 2007. <http://www.nacp.gov.pk/wp-content/uploads/2007/05/policy2007.doc> (accessed 14 Sep 2008).
5. National AIDS Control Programme, Government of Pakistan. The National HIV/ AIDS strategic framework: an overview. 2007. http://www.nacp.gov.pk/wp-content/uploads/2007/04/the-national-hiv_aids-strategic-framework.pdf (accessed 14 Sep 2008).
6. Human Rights Watch. Universal periodic review of Pakistan. Submission of Human Rights Watch to the Human Rights Council, 5 May 2008. <http://hrw.org/english/docs/2008/04/11/global18516.htm> (accessed 27 May 2008).
7. United Nations XV International AIDS Conference Satellite Meeting. Human rights at the margins: HIV/AIDS, prisoners, drug users and the law. Proceedings Bangkok, 9 Jul 2004.
8. Human Rights Watch. Ravaging the vulnerable: abuses against persons at high risk of HIV infection in Bangladesh. New York: Human Rights Watch: 2003;15/6(C). <http://www.hrw.org/reports/2003/bangladesh0803/bangladesh0803.pdf> (accessed 27 May 2008).
9. Human Rights Watch. Thailand, not enough graves: the war on drugs, HIV/AIDS and violations of human rights in Thailand. 2004;16/8(C). <http://hrw.org/reports/2004/thailand0704/thailand0704.pdf> (accessed 27 May 2008).
10. Strathdee SA, Zafar T, Brahmhatt H, et al. Rise in needle sharing among injecting drug users in Pakistan during the Afghanistan War. *Drug and Alcohol Dependence* 2003;71/1:17-24.
11. Mann JM, Tarantola DJM. AIDS in the world II. New York: Oxford

- University Press, 1996.
12. Farmer P, Connors M, Simmons J. Women, poverty, and AIDS: sex, drugs, and structural violence. Monroe, ME: Common Courage Press, 1996.
 13. Joint United Nations Program on AIDS (UNAIDS). International guidelines on HIV/AIDS and human rights: 2006 consolidated version. http://data.unaids.org/Publications/IRC-pub07/jc1252-internguidelines_en.pdf (accessed 11 Nov 2008).
 14. Rekart ML. Sex work harm reduction. *Lancet* 2005;366:2123-34.
 15. Harcourt C, Egger S, Donovan B. Sex work and the law. *Sexual Health* 2005;2: 121-8.
 16. Matthews R. Policing prostitution. *Br J Criminol* 2005;45:877-95.
 17. Cohen J. Sonagachi sex workers stymie HIV. *Science* 2004;304:506.
 18. Jayasree AK. Searching for justice for body and self in a coercive environment: sex work in Kerala, India. *Reprod Health Matters* 2004;12:58-67.
 19. Rhodes T, Singer M, Bourgois P, et al. The social production of HIV risk among injecting drug users. *Soc Sci Med* 2005;61:1026-44.
 20. Werb D, Wood E, Small W, et al. Effects of police confiscation of illicit drugs and syringes among injecting drug users in Vancouver. *Int J Drug Policy* 2008;19:332-8.
 21. Hammet TM, Bartlett N, Chen Y, et al. Law enforcement influences on HIV prevention for injection drug users: observations from a cross-border project in China and Vietnam. *Int J Drug Policy* 2005;16:365-79.
 22. Joint United Nations Program on AIDS (UNAIDS). UNAIDS Pakistan Country Report. 2004. http://www.unaids.org/en/Regions_Countries/Countries/pakistan.asp (accessed 11 Nov 2008).
 23. Haque N, Zafar T, Brahmbhatt H, et al. High-risk behaviours among drug users in Pakistan: implications for prevention of STDs and HIV/AIDS. *Int J STD AIDS* 2004;15:601-7.
 24. Zafar T, Brahmbhatt H, Imam G, et al. HIV knowledge and risk behaviours among Pakistani and Afghani drug users in Quetta, Pakistan. *J AIDS* 2003;32:394-8.
 25. Joint United Nations Program on AIDS (UNAIDS). Epidemic update. Geneva: UNAIDS, December 2004:87.
 26. Bockari A, Nizamani NM, Jackson DJ, et al. HIV risk in Karachi and Lahore, Pakistan: an emerging epidemic in injecting and commercial sex networks. *Int J STD AIDS* 2007;18:486-92.
 27. Singh JA, Govender M, Mills EJ. Health and human rights. 2 - Do human rights matter to health? *Lancet* 2007;370:521-7.
 28. Price N, Hawkins K. Researching sexual and reproductive behaviour: a peer ethnographic approach. *Soc Sci Med* 2002;55:1325-36.
 29. Collumbien M, Qureshi AA, Mayhew SH, et al. Understanding the context of male and transgender sex work using peer ethnography. *Sex Transm Infect* 2009;85(Suppl II):ii3-ii7.
 30. Hawkes S, Collumbien M, Platt L, et al. HIV and other sexually transmitted infections among men, transgenders and women selling sex in two cities in Pakistan: a crosssectional prevalence survey. *Sex Transm Infect* 2009;85(Suppl II):ii8-ii16.
 31. Heckathorn DD. Respondent-driven sampling II: Deriving valid population estimates from chain-referral samples of hidden populations. *Social Problems* 2002;49:11-34.
 32. Adimora AA, Schoenbach VJ. Social context, sexual networks, and racial disparities in rates of sexually transmitted infections. *J Infect Dis* 2005;191(Suppl 1):S115-22.
 33. Hernandez AL, Lindan CP, Mathur M, et al. Sexual behavior among men who have sex with women, men, and hijras in Mumbai, India-multiple sexual risks. *AIDS Behav* 2006;10(7 Suppl):S5-16.
 34. Wood E, Kerr T. Measuring the public health impact of police activities on illicit drug users. *Int J Drug Policy* 2005;16:148-9.
 35. Rhodes T, Mikhailova L, Sarang A, et al. Situational factors influencing drug injecting, risk reduction and syringe exchange practices in Togliatti City, Russian Federation. *Soc Sci Med* 2003;57:39-54.
 36. Mayhew SH, Douthwaite M, Hammer MA. Balancing protection and pragmatism: a framework for NGO accountability in rights-based approaches. *Health Human Rights* 2006;9:180-207.
 37. Gruskin S, Mills EJ, Tarantola D. Health and human rights. 1 - History, principles, and practice of health and human rights. *Lancet* 2007;370:449-55.
 38. Parker RG, Easton D, Klein CH. Structural barriers and facilitators in HIV prevention: a review of international research. *AIDS* 2000;14:S22-32.
 39. UN General Assembly. Human Rights Council. Addendum to Report of Special Rapporteur on Torture etc, Pakistan. 7th Session, 18 Feb 2008, 508.
 40. Narrain A. Queer struggles around the law: the contemporary context. In: Menon N, editor. *Sexualities*. London & New York: Zed Books, 2007.
 41. Reddy G. Geographies of contagion: Hijras, Kothis, and the politics of sexual marginality in Hyderabad. *Anthropology Med* 2005;12:255-70.
 42. Buse K, Lalji N, Mayhew SH, et al. Political feasibility of scaling-up five evidenceinformed HIV interventions in Pakistan: a policy analysis. *Sex Transm Infect* 2009;85(Suppl II):ii37-ii42.