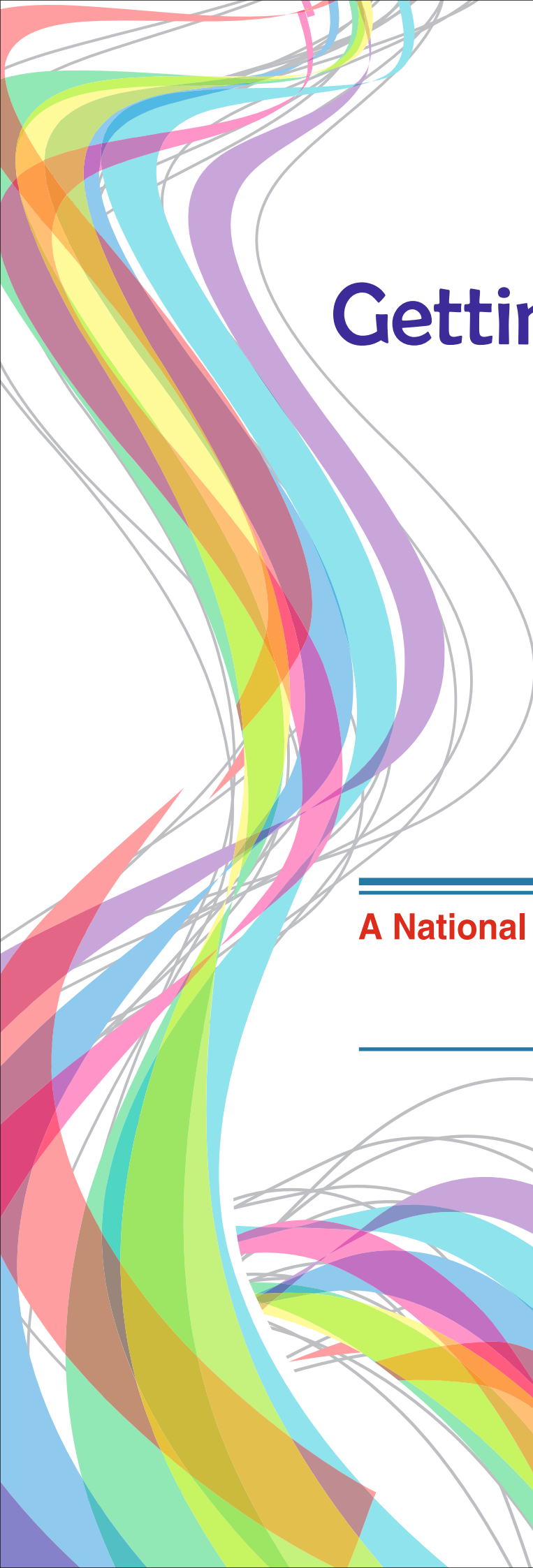




Getting to **Zero?**

**A National Survey on HIV-related Stigma
and
Discrimination in Urban India**



*Empowered lives.
Resilient nations*

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Foreword

National AIDS Control Organization (NACO), India, has been at the forefront of effectively responding to the challenges posed by HIV epidemic in India. NACO has long recognised the need for reducing the stigma and discrimination faced by people living with HIV and key populations such as female sex workers, injecting drug users, men who have sex with men and transgender people.

Both fear of discrimination and actual discrimination have prevented people living with HIV from being open about their HIV status and to access the free antiretroviral treatment services provided through the national programme. Similarly, fear of rejection by partners and one's own communities has prevented key populations from getting tested for HIV and to access prevention and treatment services. While the individual level focus of NACO's programme on improving knowledge and condom use have definitely been fruitful, reducing stigma and discrimination; including self-stigma among people living with HIV and key populations will be of great help in improving uptake of prevention and treatment services – contributing to the success of national HIV programme by improving the quality of life of people living with HIV and in averting new infections.

In this context, NACO is glad that about this stigma study commissioned by UNDP India to better understand the extent and nature of stigma and discrimination faced by people living with HIV and key populations. The findings from this 18 state study have provided actionable recommendations to bring down stigma faced by people living with HIV and other key populations from the health care providers and general public. The study findings will also be shared with the newly constituted Technical Resource Group on Stigma, which we hope will incorporate the relevant recommendations in the implementation of NACP-IV and beyond.

NACO takes pride in developing policies and programmes that are evidence-based and in this aspect, the study findings indeed have provided evidence-informed recommendations. NACO's action plan on national stigma reduction will be further strengthened from these recommendations of this important study.

Dr. Naresh Goel,
Deputy Director General
National AIDS Control Organisation,
Ministry of Health and Family Welfare
Government of India



Message

With more than 50% reduction in new infections over the last decade, NACO is a trendsetter both within the region and globally for HIV practitioners. UNDP is proud to be a partner in the various phases of the national programme since the late 90s.

Evidence of success in tackling the spread of AIDS comes from diverse programme areas, including work with sex workers and clients, injecting drug users, men who have sex with men, migrants and young people. It also comes from diverse countries, including India, the Russian Federation, Senegal, Thailand, the United Republic of Tanzania, and Zambia. Their common feature is the combination of focused approaches with attention to the societywide context within which risk occurs. Similarly, building synergies between prevention and care has underpinned success in Brazil and holds great potential for sub-Saharan Africa, where 90% reductions have been achieved in the prices at which antiretroviral drugs are available.

Success also involves overcoming stigma, which undermines community action and blocks access to services. Targeted work against stigma and discrimination has been effectively carried out in both health sector and occupational settings.

UNDP with NACO is committed to advancing knowledge and sharing information and best practices for reducing stigma and discrimination. Our focus on stigma and discrimination reduction is part of our overall effort to expand access to health services for those in the greatest need.

The HIV stigma study is a NACO – UNDP joint initiative that provides a tool to measure and detect changing trends in relation to stigma and discrimination experienced by people living with HIV. Conducted by local investigators in India encompassing 18 states and more than 11,000 respondents from the General Population, Health care workers, sex workers, MSM, TG, IDU as well as PLHIV, this research offers insight into the experiences of people living with HIV, negative social responses encountered, and the roots of HIV-related discrimination, stigma and denial. It aims to address stigma relating to HIV while also advocating on the key barriers and issues perpetuating stigma.

While the work described in this report does not claim to offer the last word on these matters, it does highlight a series of policy, programming and research implications.

Ending HIV-related stigma and discrimination will take considerable investment of time and resources, but our commitment is steadfast, and we are grateful to those who keep showing us how to do it better.

Jaco Cilliers
Country Director UNDP
India



Acknowledgments

This large scale multi-site study on HIV stigma was commissioned by UNDP India. It was implemented by Monitoring and Research Systems (MaRS) which also carried out data entry. Two consultant researchers –Dr.VenkatesanChakrapani, Centre for Sexuality and Health Research and Policy (C-SHaRP) and Dr. Shalini Bharat, Tata Institute of Social Sciences (TISS), conducted data analysis, and drafted and finalised the report.

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Abbreviations and Acronyms

AIDS	Acquired Immune Deficiency Syndrome
APN+	Asia Pacific Network of People Living With HIV
FSW	Female Sex Worker
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
ICRW	International Centre for Research on Women
ICW	International Community of Women Living with HIV/AIDS
IDU	Injecting Drug User
IPPF	International Planned Parenthood Federation
GNP+	Global Network of People Living with HIV/AIDS
GP	General Population
KP	Key Population
MaRS	Monitoring and Research Systems Private Limited
MSM	Men who have Sex with Men
PLHIV	Person Living with HIV or AIDS
TG	Transgender
UNDP	United Nations Development Programme
USAID	United States of Agency for International Development
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDAF	United Nations Development Actions Framework
WHO	World Health Organisation



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EXECUTIVE SUMMARY

1. BACKGROUND AND OBJECTIVES

HIV-related stigma is recognized as a key obstacle to HIV prevention, care, and treatment besides adding to psychological distress for the affected. Fear of, and actual experience with, stigma and discrimination associated with HIV often negatively influence an individual's willingness to seek HIV testing, disclose his or her HIV status to others, ask for (or give) care and support, initiate or sustain safer sex or safer injecting drug use practices, and begin and adhere to treatment. Recognising these negative impacts of HIV-related stigma on public health, UNAIDS has a vision of zero discrimination – to abolish discrimination towards people living with HIV and other marginalised communities at-risk for HIV, in order to facilitate access to services and to promote their human rights.

Several qualitative studies in India have generated useful insights into the forms, expressions and dynamics of HIV related stigma. However, there are not many quantitative studies in the country using survey design that would help generalise the findings to the larger population and assess the magnitude of the problem for designing interventions. In a society as diverse as the Indian society, survey designs are also needed to understand how stigma types, levels, forms and experiences vary by socio-demographic as well as contextual factors of HIV prevalence, transmission patterns and characteristics of infected populations. Further, most available studies document the experiences of the stigmatised population (e.g., people living with HIV). For comprehensive stigma reduction interventions it is critical to examine HIV-related stigma from the perspective of both the targets of stigma and its perpetrators (e.g., general public and health care workers). Recognising these significant gaps in existing research on stigma the UNDP-India commissioned this study to quantitatively assess HIV-related stigma among four population groups: General Population (GP), Healthcare workers (HCWs), Key Populations (KPs- MSM, TG, FSWs, IDUs), and People living with HIV (PLHIV) in urban India.

The stigma domains covered were:

- Instrumental stigma (fear of transmission of HIV through casual contact, HIV-related misconceptions)
- Symbolic stigma (shame, blame and moral judgment towards PLHIV)
- Enacted stigma (acts of discrimination against PLHIV)

Additionally, a specific study objective for PLHIV group was to quantitatively assess levels of self-stigma or internalized stigma; and for HCWs group, a specific objective was to measure their perception of occupation-related HIV risk and their comfort level in providing services to PLHIV.

2. METHODS

The study was conducted in urban areas of 18 Indian states: two Northern states, five eastern states, four North-Eastern states, three western states and four southern states. A total of 7897 respondents from the general population, 1637 from key populations, 1630 people living with HIV and 584 health care workers participated



in this study. The survey questionnaire contained scales/constructs that measured HIV transmission knowledge and misconceptions, symbolic stigma, endorsement of discriminatory actions against PLHIV, and witnessing of discrimination against PLHIV in health care settings (HCWs). Among PLHIV, discrimination experience, self-stigma, and changes in social interactions and life goals were measured. Data collection and entry were conducted by MaRS research agency, using trained research staff in 2009/10. Data analysis was conducted using IBM SPSS version-21.

3. FINDINGS

A. General Population

About two-thirds of the GP respondents were in the age group of 18 and 35 years, three-fourths had studied up to high school and above, three-fifths were married, and about one-tenth knew a person living with HIV.

HIV transmission misconceptions

About one-third of the GP respondents held the misconception that they could get HIV if they were exposed to sweat (24%) or excreta (32%) of PLHIV. About one-third expressed risk of HIV transmission to children if they played with HIV-positive children and more than one-third were afraid of getting HIV from sharing a toilet with or being exposed to the saliva of PLHIV. Female GP respondents were more likely than males to be afraid of getting HIV from casual contact with PLHIV.

Symbolic stigma (value-driven stigma resulting in shame, blame and judgmental attitudes towards particular groups)

Over half of the GP respondents (61%) associated shame with HIV, two-thirds blamed the key population and 'promiscuous' men for spreading HIV as well as judged HIV to be a punishment from God for their wrong behaviours. In general, women had relatively higher levels of stigmatizing attitudes towards PLHIV and vulnerable groups such as, FSW.

Endorsement of discrimination against PLHIV

About three-fourth (72%) of the GP respondents disapproved discriminatory acts against PLHIV, with the approval ratings in the range of 6% to 14% on various items. About one-tenth endorsed the statement that PLHIV can be 'excluded from social gathering' or can be 'kept separate from the community'.

B. Key Populations (MSM, FSWs, IDUs, TG)

More than four-fifths (84%) of the KP respondents were aged 25 years and above. Most of them had more than primary level of education, with the exception of FSWs among whom most were illiterate. A relatively higher proportion of IDUs and TG people personally knew PLHIV, when compared to MSM and FSWs.

HIV transmission misconceptions

All members of KPs harboured some concerns about HIV transmission through casual contact, especially with saliva and sweat. TG participants had the highest level of fear of casual contact followed by MSM, FSWs, and IDUs.

Symbolic stigma

Stigmatizing attitudes that shame, blame and judge PLHIV negatively were prevalent among all subgroups of KPs. A relatively higher proportion of IDUs and MSM endorsed blame statements (example: 'It is female sex workers who spread HIV in the society'), when compared with FSWs and TG people; and a higher proportion



of FSWs endorsed shame statements (example: 'PLHIV should be ashamed of their HIV status') than other KPs.

Endorsement of discrimination against PLHIV

Majority of IDU, MSM and TG reported they would disapprove of discrimination (or enacted stigma) against PLHIV, with only up to one-third endorsing discriminatory actions against PLHIV. In general, there was no significant difference among the subgroups in endorsement of discriminatory actions.

C. People Living with HIV (PLHIV)

About two-thirds (66%) of PLHIV respondents were in the age group of 18 to 35 years, 62% were educated less than high school and 51% were married. Most PLHIV reported that either a family member or friend or neighbour were informed or aware of their HIV status. About half of the women and about two-fifths of the men reported that their spouse knew of their HIV status.

Discrimination experiences

Social exclusion and isolation were the commonest forms of stigma experienced by up to one-third of PLHIV followed by loss of social status and role. Women living with HIV had experienced more forms and higher levels of discrimination than men with HIV. And, among women, widows experienced considerably more forms and higher levels of discrimination than married or single positive women.

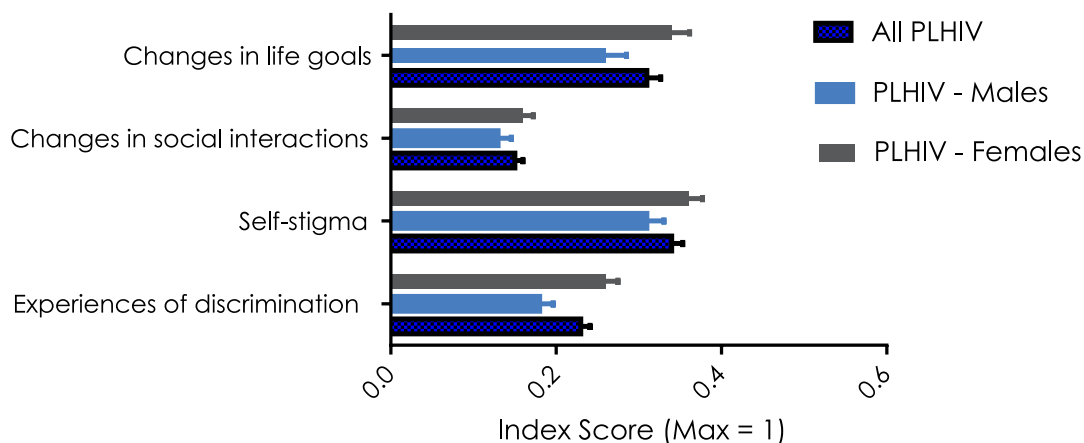
Self-stigma

All PLHIV respondents reported high levels of self-stigma. Shame associated with one's HIV-positive status was the most prevalent feeling, followed by feelings of guilt and self-blame. More women reported all forms of self-stigma, especially self-blame and felt they deserved to be punished for having HIV.

Changes in social interactions and life goals

Self-exclusion from social gatherings and family/friends were reported by about one-third of the participants, with relatively more women reporting it than men. Also, nearly half reported that they had decided not wanting to have sex and about one-third reported not wanting to have children, with relatively more women than men endorsing these statements.

Summary: Index scores on stigma experiences of PLHIV



D. Healthcare Workers

In this sample, more than half of HCWs were in the age group of 18 to 35 years. Sixty percent were clinical staff (doctors and nurses) and the remaining were non-clinical staff (e.g., pharmacists, lab technicians).

HIV transmission misconceptions

While nearly all HCWs agreed that sweat, tears and urine are not infectious, about one-fourth thought that saliva contains high concentration of HIV (26% of clinical staff vs. 18% of non-clinical staff). Only 5.3% of clinical staff and 3.3% of non-clinical staff incorrectly reported that there is risk of HIV from touching the skin of a person with HIV. Despite this, about three-fourths of both clinical and non-clinical staff endorsed the use of gloves for performing any task related to the care of a patient who might be having HIV.

Fear of occupational risk of HIV acquisition and comfort level in providing care for PLHIV

About half of the HCW respondents agreed that the most frequent mode of contracting HIV among HCWs was through work-related exposure (no difference between clinical and non-clinical staff). At the same time, most of the HCWs reported feeling comfortable providing services to PLHIV (89%) or working with HIV-positive colleagues (80%).

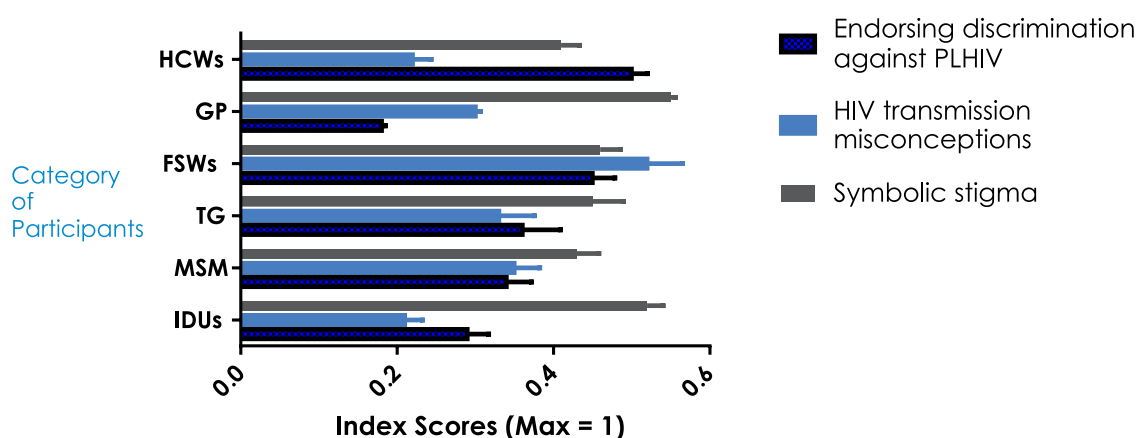
Symbolic stigma

About two-fifths of HCWs endorsed statements related to shame and blame. For example, about two-fifths believed that 'HIV is a punishment for bad behaviour' and about three-fifths blamed 'promiscuous' men and FSWs for spreading HIV in the society.

Witnessing discrimination against PLHIV in health care settings

In general, a majority HCWs reported having witnessed one or more forms of discrimination against patients who were either suspected to be or were HIV-positive. For example, about one-third of both clinical and non-clinical staff reported that they had personally witnessed PLHIV receiving less care and attention than other patients and about three-fourth or more of the respondents reported that they had seen: HCWs taking more care than required in sterilizing instruments; referring some clients to be tested for HIV before scheduling surgery; and using latex gloves for performing non-invasive exams on clients known or suspected to have HIV.

Summary: Mean Index Scores among Respondent Groups on Stigma & Knowledge measures^a



a. Among HCWs, the mean index score related to discrimination is actually 'Witnessing discrimination against PLHIV in the health care setting in the past year'.



4. CONCLUSIONS

Persistence of HIV-related stigma among general public and health care workers

- Findings of this study demonstrate that HIV-related stigma continues to persist in India even after three decades of HIV epidemic in the country and despite efforts to reduce it.
- HIV transmission-related misconceptions and fear of HIV risk from casual contact, as well as symbolic stigma (value judgments, blame and shame) were found to be associated with endorsement of discriminatory actions against PLHIV (which can be understood as indirect intentions to discriminate against PLHIV). These have serious implications in the context of health care delivery as well as care and support for PLHIV within their own families or communities.

Extent of HIV transmission misconceptions and fear-based stigma (stigma based on fear of getting HIV)

- Fear of HIV transmission from non-blood body fluids (such as saliva and sweat) that have very low or almost no risk of HIV transmission was reported despite the mass media messages on the correct modes of transmission of HIV. The study underscores the urgency of articulating and debunking such transmission-related misconceptions in HIV awareness campaigns.
- Avoidance of casual contact with actual or suspected PLHIV was reported across the population groups (GP, KPs and HCWs). It is not clear, however, whether avoidance of PLHIV is because of overestimated risk of getting HIV (or other infections) from casual contact or because of the moral element associated with someone who is PLHIV. i.e., judging a person as immoral and thus as 'untouchable'.
- HIV transmission misconceptions, in general, were relatively less when compared with symbolic stigma (as seen from the comparison of index stigma scores across the populations), highlighting the need to focus on symbolic stigma reduction alongside creating awareness about HIV transmission and prevention. Only FSWs, in particular, had higher index scores on HIV transmission misconceptions than symbolic stigma, when compared with all other groups including GP respondents. Thus, among FSWs, the focus could be more on removing HIV transmission misconceptions than reducing stigma related to moral or judgemental values.

Symbolic stigma (value-driven stigma of shame and blame) against PLHIV persists among general public, HCWs and key populations

- Symbolic stigma index scores were the highest among GPs, followed by HCWs and KPs, and had strong associations with endorsement of discriminatory actions against PLHIV. This further confirms the need to focus on addressing prejudices based on gender, sexuality and morality in society as well as among HCWs, as HIV-related stigma intersects with other prejudices based on gender and sexual identities. For example, women living with HIV faced higher levels of discrimination than men and widowed women faced highest level of discrimination among women of different marital status.
- Similarly, the finding that a significant proportion of GPs and HCWs believe that FSWs and other KPs are responsible for the spread of HIV shows that



prejudices related to women in sex work and other marginalised populations may further aggravate stigma faced by PLHIV. This underscores the need to explicitly focus on ways to reduce, if not eliminate, value judgments, shame and blame associated with PLHIV or people belonging to certain vulnerable groups. So far, no specific interventions in India seem to have focused on these aspects of stigma reduction, even though 'value clarification' sessions in some of the HIV training programs for HCWs are included in an ad hoc manner.

PLHIV continue to face discrimination within health care settings

Despite a considerable majority of HCWs reporting being comfortable in providing services to PLHIV, a significant proportion reported having witnessed discriminatory acts against PLHIV in health care settings in the past year. These indicate that PLHIV continue to face barriers in the health care settings in getting proper attention and treatment. It also supports the finding that nearly one-third of PLHIV reported having received poor quality of health services in the past year.

High levels of self-stigma among PLHIV

High levels of self-stigma among PLHIV, especially among women living with HIV, and changes reported by PLHIV in social interactions and personal goals after their HIV diagnosis show that PLHIV internalize the society's negative attitude towards PLHIV, and suffer psychologically. This points to the need for strengthening counselling and other forms of support for PLHIV in overcoming self-stigma and to avoid its negative consequences. The gender dimensions of self-stigma need to be carefully addressed in counselling sessions.

5. RECOMMENDATIONS

Implications for Stigma reduction programmes

Addressing misconceptions, Stigmatising attitudes, Discriminatory intentions

Focused HIV-related stigma reduction programmes need to be introduced and intensified among the general population, health care workers and key populations. Media messages need to move beyond providing mere educational messages on the correct modes of HIV transmission and promoting acceptance of PLHIV to explicitly addressing myths and misconceptions related to fear of HIV transmission. In particular, risk perception from non-blood body fluids such as saliva and sweat and from casual contact, need to be corrected given that all groups of study respondents (GPs, HCWs and KPs) seem to overestimate HIV risk from exposure to saliva and casual contact. Worries related to risk of HIV among children through play activities with HIV-positive children were especially high. These must be corrected among both parents and children with the objective of addressing baseless misconceptions among young people.

HIV misconceptions and value-driven stigma (stigma based on moral/judgemental values) among the participants were found to be associated with discriminatory intentions (endorsement of discriminatory actions against PLHIV), pointing out the interconnections between them. This underscores the need to focus on reducing or eliminating both HIV misconceptions and negative attitudes towards PLHIV and marginalised groups in order to reduce or abolish discrimination.

Addressing intersectional stigma

The study findings lend strong support to the intersectional nature of HIV-related stigma underscoring the need to link HIV stigma to prevailing and deeply entrenched



structural factors. Stigma reduction programmes thus need to explicitly educate the public and HCWs about sexual and gender diversity within society, drug dependency issues and the rights of sex workers. That is, besides educating people about HIV, programmes also need to address the stigma faced by sexual minorities, drug users and sex workers, and make the public and HCWs understand the sources of vulnerability of these populations to HIV and their rights to dignity, health and other services and a stigma-free environment.

Campaigns, Trainings and Sensitisation

Stigma reduction programmes for the public can be part of mass media and mid-media campaigns and can be geographically targeted – for example, different strategies in cities with high HIV prevalence and for key populations. The programmes for the HCWs can be integrated into periodic HIV trainings (including refresher trainings) and training on universal precautions and hospital safety, in which the difference between ‘universal precautions’ and fear-based ‘extra precautions’, as found in this study, need to be reinforced. For the newer generation of HCWs such trainings can be part of the medical, nursing and paramedical course curricula. Trainings for HCWs also need to incorporate topics on gender, social marginalisation and vulnerability for developing a deeper understanding among them of social drivers of the epidemic. Among KPs, stigma reduction efforts can be channelled through the HIV intervention projects so that KPs can accept PLHIV within their own communities and also outside. This will also help PLHIV among these communities to disclose their status and get necessary treatment and support.

Involving PLHIV and marginalised groups in awareness and training programs

Personally knowing a person living with HIV, essentially giving a human face to the HIV epidemic, seems to be useful, as this study too found it was associated with less discrimination intention. Thus, involving PLHIV in stigma reduction campaigns targeted towards general population and in the trainings of HCWs may help GP and HCWs in better understanding of the issues faced by PLHIV.

Addressing self-stigma and specific issues of women living with HIV

Given the high levels of self-stigma, especially among women living with HIV, stigma reduction interventions need to develop programs that will help PLHIV to develop their self-worth using a gender-sensitive approach. In addition to encouraging PLHIV to join support groups of PLHIV and use other available services within PLHIV networks, professional psychological counselling support and mental health referrals need to be provided. Counsellors at the health care settings and voluntary agencies (including PLHIV networks) need to screen for self-stigma and offer support in reducing self-stigma and its impact (on social interactions and change in life goals) through one-to-one counselling and educational services to help PLHIV to lead fulfilling social and professional lives.

Special attention needs to be given to address the issues faced by women living with HIV, especially widows, as they tend to be discriminated more by their families and communities, when compared to men. Counsellors may also specifically help in promoting the acceptance of PLHIV within their own families, including facilitating disclosure of HIV status and practising safer sex or safer injecting drug use until or even after disclosure.

Implications for policies

Having and enforcing explicit policies on non-discrimination and making others aware of such policies will help in deterring people from engaging in discrimination



against PLHIV and other vulnerable groups. However, this strategy needs to go hand-in-hand with promoting better understanding of the rights of, and issues faced by, PLHIV and groups at-risk for HIV.

Future research

As there is a near lack of rigorously-evaluated culturally-competent stigma interventions in India, future research need to design and test evidence-based stigma reduction interventions among different populations (GP, HCWs, and KPs) and self-stigma reduction interventions among PLHIV (including those PLHIV from KPs). Existing stigma-related measures (scales) need to be refined and validated among different populations and in different settings (especially urban areas). Also, longitudinal studies that periodically measure the levels and forms of stigma among the various populations and stigma faced by PLHIV will help in monitoring the trends in stigma, and in evaluating whether stigma reduction efforts are working.



INTRODUCTION

*“People who discriminate narrow the world of others as well as their own.
I believe in a world where everyone can flower and blossom.”*
— Daw Aung San SuuKy, Nobel Peace Laureate

Well into the fourth decade of the HIV epidemic, stigma and discrimination due to HIV and AIDS continue to persist worldwide. HIV-related stigma and discrimination refer to negative attitudes, blame, abuse and maltreatment directed at people living with HIV or people who are vulnerable to HIV – such as, sex workers, injecting drugs users, men who have sex with men and male-to-female transgender people. Stigma can lead to people being shunned by their family, peers and the wider community resulting in psychological damage; denial of or suboptimal services in healthcare, work and educational settings; and erosion of human rights (Mahajan et al., 2008). In addition, fear of and actual experience with stigma and discrimination reduce an individual's willingness to practice prevention, seek HIV testing, disclose his or her HIV status to others, ask for or give care and support, and begin and adhere to treatment, thereby undermining the public health efforts to control the spread and impact of HIV epidemic. Recognising these widespread negative impacts of HIV-related stigma, UNAIDS has a vision of zero discrimination together with the vision of zero new HIV infections, and zero AIDS-related deaths (UNAIDS, 2014).

HIV-related stigma is a complex phenomenon as attitudes towards the epidemic and those infected and affected are not new but shaped by deeply entrenched prejudices and traditional power hierarchy in society (Parker & Aggleton, 2003). Reactions to HIV/AIDS are not uniform and vary between individuals and population groups, even within the same country. Gender, sexuality, age, education and levels of knowledge about HIV can affect how someone feels about the disease and acts towards those infected by it. HIV-related stigma is not static. It may change in form and intensity with changes in infection levels, knowledge of the disease and treatment availability (Mama et al., 2009). Measuring HIV stigma in a reliable way and using quantifiable indicators that can be compared across settings and groups can help determine its magnitude and provide baseline information for interventions designed to reduce it.

While some Indian studies have explored attitudes and discriminatory intentions of health workers (Ekstrand et al., 2013) and general population towards PLHIV (Bharat, 2011; Bharat et al., 2014), only few studies have documented stigma and discrimination experiences of key populations (KPs) (Blankenship et al., 2010; Chakrapani et al., 2004 & 2007). And none have explored attitudes of KPs towards PLHIV and their intentions to discriminate, despite their disproportionate representation among PLHIV when compared to general population. This study is one of the first in the country that has attempted to understand and estimate levels of stigmatizing attitudes of KPs towards PLHIV and factors associated with those attitudes within a comparative perspective.



Study Objectives

Several qualitative studies in India have generated useful insights into the forms, expressions and dynamics of HIV related stigma. However, there are not many quantitative studies in the country using survey design that would help generalise the findings to the larger population and assess the magnitude of the problem for designing interventions. In a society as diverse as the Indian society, survey designs are also needed to understand how stigma types, levels, forms and experiences vary by socio-demographic as well as contextual factors of HIV prevalence, transmission patterns and characteristics of infected populations. Further, most available studies document the experiences of the stigmatised population (e.g., people living with HIV). For comprehensive stigma reduction interventions it is critical to examine HIV-related stigma from the perspective of both the targets of stigma and its perpetrators (e.g., general public and health care workers). Recognising these significant gaps in existing research on stigma the UNDP-India commissioned this study to quantitatively assess HIV-related stigma among four population groups: General Population (GP), Healthcare workers (HCWs), Key Populations (KPs - MSM, TG, FSWs, IDUs), and People living with HIV (PLHIV) in urban India.

The stigma domains covered were:

- Instrumental stigma (fear of transmission of HIV through casual contact, HIV-related misconceptions)
- Symbolic stigma (shame, blame and moral judgment towards PLHIV)
- Enacted stigma (acts of discrimination against PLHIV)

Additionally, a specific study objective for PLHIV group was to quantitatively assess levels of self-stigma or internalized stigma; and for HCWs group, a specific objective was to measure their perception of occupation-related HIV risk and their comfort level in providing services to PLHIV.

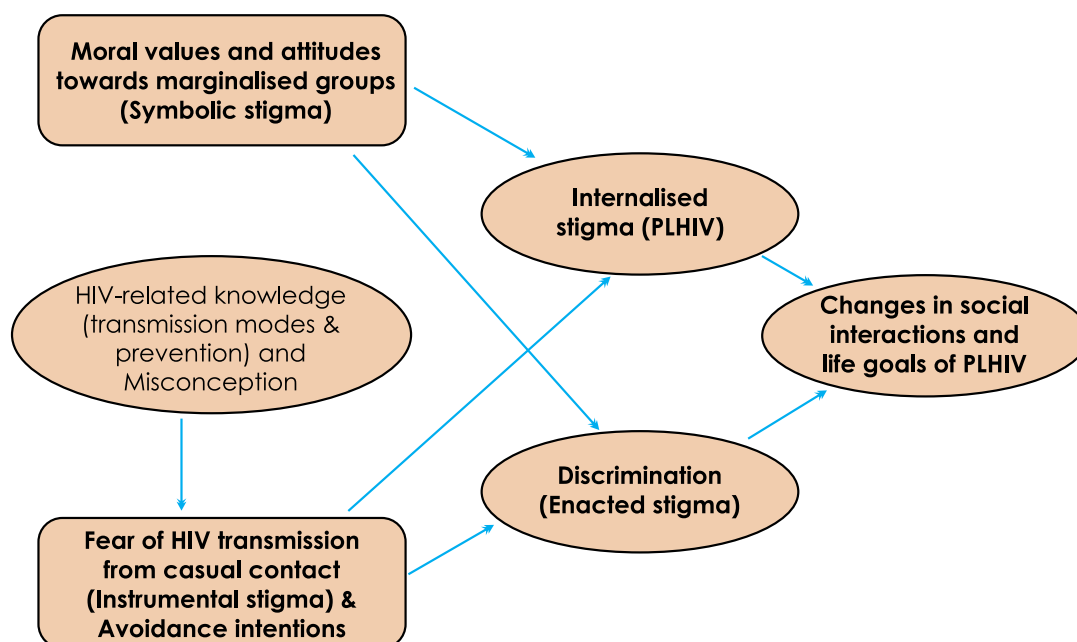
Conceptual framework

HIV-related stigma is driven by both fear of HIV transmission by casual contact (i.e., instrumental stigma) and by the pre-existing social prejudices and moralistic values and attitudes towards marginalized groups such as, female sex workers, injecting drug users, men who have sex with men and transgender people (i.e., symbolic stigma). Instrumental stigma underlies people's tendency to avoid PLHIV in routine life and in various settings while symbolic stigma explains society's judgmental attitude, and shaming and blaming of the PLHIV for their condition. Often both types of stigma co-exist to produce avoidance as well as judgmental behaviour towards PLHIV.

Avoidance of PLHIV, naming and blaming them, or any hostile behaviour shown towards them are understood as acts of discrimination resulting from stigma. Also, PLHIV may experience internalized stigma (self-stigma) as a result of perceived or actual experience of negative societal attitudes and discrimination. Anticipated or actual discrimination and internalized stigma – both can influence social interactions and personal and professional life goals of PLHIV. Interrelationships among types of stigma and consequences for PLHIV are summarised in Figure 1.



Figure 1. Conceptual framework used in this study



Box 1. Glossary of stigma-related terms

HIV-related stigma refers to the devaluing of people who are HIV-positive or assumed to be HIV positive or are associated with HIV and AIDS. Stigma often results in discrimination expressed as denial of services, social exclusion, and isolation. HIV-related stigma interacts with structural inequities and may be exacerbated for populations marginalized due to risk behaviour (e.g., injection drug use, sex work), demographic characteristics (e.g., socio-economic status, migrants) and identity (e.g., sexual orientation).

Self-stigma (or internalized stigma) refers to a stigmatized individual's acceptance of negative beliefs, views and feelings towards oneself and towards the stigmatized group of which he/she is a member.

Enacted stigma or Discrimination encompasses overt and covert acts, such as violence, denial of services, social exclusion and withdrawal of facilities for the affected individuals or groups.

Discrimination typically refers to differential or less favourable treatment, such as the denial of goods or services to a person, based on a real or perceived characteristic of that person. Some researchers include discrimination in conceptualizations of stigma (e.g., 'enacted stigma'), others differentiate discrimination (a behaviour) from stigma (an attitude).

Symbolic stigma refers to blaming and shaming of a marginalized group (e.g. PLHIV) and people associated with this stigmatized group (e.g. sex workers, gay/bisexual men) based on pre-existing moral judgments and prejudices in society about sex, sexuality, and gender.

Instrumental stigma refers to negative attitudes and discrimination based on an exaggerated or inflated fear of contracting HIV. This stigma is driven by misconceptions and incomplete information about HIV transmission, usually resulting in avoidance behaviour.

Intersecting/Intersectional (or layered) stigma refers to multiple, interrelated stigmatizing attitudes that mutually reinforce one another and often act to further marginalize vulnerable groups. For example, a gay person living with HIV faces stigma associated with HIV as well as sexual orientation.



METHOD

Study States and Sites

The study was conducted in the urban areas of 18 Indian states that provide a fairly adequate regional representation of the country, representing all five regions, with different levels of HIV prevalence and socioeconomic conditions. The five regions were:

1. Northern region: Rajasthan, Uttar Pradesh
2. Eastern region: Orissa, West Bengal, Bihar, Chhattisgarh and Jharkhand
3. North-eastern region: Manipur, Meghalaya, Mizoram, Nagaland
4. Western region: Gujarat, Madhya Pradesh, and Maharashtra
5. Southern region: Andhra Pradesh, Karnataka, Kerala, Tamil Nadu

The surveys for general population and health care workers were conducted in 80 urban sites spread across the 18 study states. These sites were selected to represent the capital city of the respective states, major industrial towns and a few smaller towns.

Study populations and Sample Size

The four study populations were:

- General population (males and females)
- Key populations from four subgroups: female sex workers (FSWs), men who have sex with men (MSM), male-to-female transgender community (TG), and injecting drug users (IDUs)
- People living with HIV (PLHIV) – males and females
- Healthcare workers – clinical (doctors and nurses) and non-clinical staff (e.g., lab technicians, pharmacists)

Table 1. Sample size of study populations

Respondent category	Sample size (N)	Subgroup sample size
General Population	7987	Males: 4025 Females: 3962
Healthcare Workers	584	Clinical staff: 341 (Doctors and Nurses) Non-clinical staff: 243 (e.g., Pharmacists, technicians)
Key Populations	1637	FSWs: 208 MSM: 494 TG people: 254 IDUs: 681
People living with HIV	1630	Males: 620 Females: 1010
Total	11838	



Sampling and Recruitment

General population

Systematic sampling was used to identify households to sample GP respondents. Number of random start points for each sample town was calculated by dividing the sample size allocated to the town by 5. Random start points were then selected in the sample town by carrying out zoning exercise so that various settlement types in the town are represented. From each random start point five sample households were selected using systematic sampling following left hand rule and an interval of three households. One respondent was selected from each household.

Healthcare Workers

In general, a convenience sampling approach was used even though the study sites were the same as that for the general population respondents. The sample of healthcare workers was selected from the health facilities found along the route taken by the investigators during the general population survey. This ensured that HCW respondents were broadly representative of the urban sites from where the GP sample was selected. The health facilities included private clinics and nursing homes, medium sized private hospitals, and government health centres and hospitals. Very large sized private hospitals were excluded because of non-cooperation as well as difficulties encountered in respondent selection. Only one or two respondents were selected from each of the health care facilities in the study sites.

Key populations and PLHIV

The KPs and PLHIV were interviewed by peer investigators recruited from NGOs working with these populations. FSWs were recruited from two states (West Bengal and Assam), IDUs from 15 states^b, and MSM and TG people from 7 states^c. Two workshops were organized for the peer investigators, one in Mumbai for key populations and one in Delhi for PLHIV. Each workshop was conducted over two days and prepared the investigating team on interview techniques, administering the questionnaire and sample selection technique for the desired profile of the target respondents.

Measures

Socio-demographics

These included age, gender, marital status, education, employment status and monthly income.

Stigma measures

The measures used for assessing stigma indicators among PLHIV were finalized after consulting several sources. The final tool was based on PLHIV Stigma Index, a joint initiative of several organizations^d who have worked together since 2005, as well as from indicators compiled by ICRW (Nyblade&MacQuarrie, 2006). For all of these measures, mean raw and index scores^e were calculated.

b. Delhi, Bihar, Uttar Pradesh, West Bengal, Manipur, Sikkim, Nagaland, Assam, Maharashtra, Madhya Pradesh, Gujarat, Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Orissa

c. Delhi, Gujarat, Haryana, Maharashtra, Tamil Nadu, Uttar Pradesh, West Bengal

d. The Global Network of people living with HIV/AIDS (GNP+), The International Community of Women Living with HIV/AIDS (ICW), The International Planned Parenthood Federation (IPPF) and Joint United Nations Programme on HIV/AIDS (UNAIDS)

e. Index scores are useful for comparing various stigma scales/constructs irrespective of the number of items and how they are scored.



Instrumental stigma and avoidance intentions

Fear of getting HIV infection through casual contact and avoiding contact with PLHIV are major domains of stigma assessment. In this study, two sets of indicators were used. The first set assessed fear of exposure to bodily fluids such as: exposure to saliva, to sweat and to excreta. The second set assessed fear of physical contact that included physical touch, sharing a hospital room with PLHIV and an item measuring fear of HIV transmission from one child to another during play.

Symbolic stigma

This domain of stigma measurement reflects moral-/value-driven stigma where based on existing prejudices, assumptions and judgments are made about how PLHIV contract HIV, which are in turn manifested in stigmatizing attitudes (Ogden & Nyblade, 2005; Pulerwitz et al., 2010). In this study, three key dimensions were measured: shame, blame and judgment. Judgment and blame were measured by asking whether the person agrees or disagrees with four statements (on a four-point Likert scale): HIV is a punishment from God; HIV/AIDS is a punishment for bad behavior; It is women sex workers who spread HIV in the community; and People with HIV are promiscuous. Shame was measured by asking the respondents whether they would agree or disagree with the following two statements: 'I would be ashamed if I were infected with HIV'; and 'I would be ashamed if someone in my family had HIV/AIDS'. Response options were: agree (coded as 1) and disagree (coded as 0). An overall raw score was obtained as the mean of all 7 items (Range: 0 to 7); a higher score indicating higher levels of symbolic stigma.

Discrimination (Enacted Stigma)

Discrimination can be defined as the negative acts that result from stigma and that serve to devalue and reduce the image of the stigmatized in society. In simplified terms, discrimination is the behavioural dimension of stigma. The person or community is discriminated because of a stigma that he/she carries or they collectively carry. Enacted stigma captures a wide set of discriminatory actions. In this study, under 'enacted stigma', other stigmatizing actions that are not usually captured under the term discrimination – such as gossip, social or physical isolation, or loss of business clientele due to one's HIV status – were asked. The indicators used, therefore, provide percent of people who would agree or disagree with these kinds of discriminatory actions (experiences in the previous year) that may be practiced against a person because he or she was known or suspected to have HIV. Response options were: Yes, No and can't say. 'Yes' was coded as '1' and 'No and can't say' were coded as zero. An overall raw score was obtained as the mean of all 18 items (Range: 0 to 18); a higher score indicating higher levels of discrimination.

Self-stigma (Internalised Stigma)

Self-stigma was measured by a 7-item scale. The items assessed experience of shame, guilt, self-blame, low self-esteem, and suicidal feelings in the past year. For example, some of the items are: Have you – 'felt ashamed of your HIV status', 'felt guilty of your HIV status', and 'blamed yourself for your HIV status'. Response options were: yes (coded as 1), no (coded as 0). An overall raw score was obtained as the mean of all items (Range: 0 to 7); a higher score indicating higher levels of self-stigma.



Changes in social interactions following HIV diagnosis

Participants were asked whether, since their HIV diagnosis, they have: chosen not to attend social gathering(s), isolated themselves from their family and/or friends, took the decision to stop working, decided not to apply for a job/work or for a promotion, and withdrew from education/training or did not take up an opportunity for education/training. Response options were: yes (coded as 1), no (coded as 0). An overall raw score was obtained as the mean of all items (Range: 0 to 5); a higher score indicating higher levels of changes in social interactions.

Changes in personal life-goals

Three items explored whether participants had made any changes regarding marriage, sexual life, and having children after their HIV diagnosis. Response options were: yes (coded as 1), no (coded as 0). An overall raw score was obtained as the mean of all items (Range: 0 to 3); a higher score indicating higher levels of changes in personal life goals.

Other measures

HIV Transmission misconceptions

Among GP and KPs, their perceived chances of contracting HIV from exposure to body fluids of PLHIV and by casual physical contact with PLHIV were assessed. For example, whether or not they endorsed statements such as: 'You could become infected with HIV – if you are exposed to saliva of PLHIV, if you are exposed to sweat of PLHIV, if you share a hospital room with PLHIV'. Response options were: yes (coded as 1), no (coded as 0). An overall raw score was obtained as the mean of all items (Range: 0 to 7); a higher score indicating higher levels of misconceptions.

Level of knowledge about concentration of HIV in body fluids

HCWs, in their clinical or lab practice, may come into contact with a variety of body fluids. As level of knowledge about concentration of HIV in body fluids may determine whether HCWs are willing to serve (or touch) PLHIV, questions were asked to assess knowledge on this aspect.

Comfort level in providing services to PLHIV

Comfort level of clinical and non-clinical staff in providing services to PLHIV was assessed by two items: a global item asking whether they are 'comfortable providing health services to clients who are HIV-infected', and a more specific item in relation to comfort level with invasive procedures ('comfortable performing surgical or invasive procedures on clients whose HIV status is unknown').

Endorsement of discriminatory actions against PLHIV

Among the GP respondents, indirect way of measuring one's 'intent to discriminate against PLHIV' was measured by a 5-item scale, which asked whether the respondents approve of the following actions against PLHIV: exclusion from social gatherings, abandonment by spouse/partner, teasing or being sworn at, isolation within the household, and isolation from the community. For the KPs, the same 5-item scale, with one modification in relation to the 'isolation from the community' was used. This fifth item that measured 'rejection' was worded slightly differently to take into



account the different contexts for the different subgroups of KPs. For MSM and TG people, it was 'rejection by close friends', for FSWs - 'rejection within brothel', and for IDUs - 'rejection or denial of services within detox centre'.

Table 2. Details of scales/constructs used: Items, Score range, and list of items			
Scale / Construct	Number of items	Range of raw scores	List of items
Common scales for Respondents from General Population and Key Populations			
HIV transmission misconceptions	7	0-7	You could become infected with HIV: • If you are exposed to saliva of PLHIV • If you are exposed to sweat of PLHIV • If you are exposed to excreta of PLHIV • If you share a hospital room with PLHIV • By sharing a toilet with PLHIV • By touching items that have been touched by PLHIV A specific item: • A child could become infected with HIV if they play with a child who has HIV
Symbolic stigma	7	0-7	Judgement and Blame: • HIV is a punishment from God • HIV is punishment for bad behaviour • People with HIV are promiscuous • Promiscuous men spread HIV in our community • It is the female sex workers who spread HIV Shame: • I would feel ashamed if I was infected with HIV • I would feel ashamed if someone in my family was infected with HIV
Endorsement of discriminatory actions	5	0-10	If this incident happens to PLHIV in your presence or in your neighbourhood, how would you react? Would you approve, disapprove or be neutral? • Excluded from the community • Abandoned by spouse/partner • Teased or sworn at • Isolated within the household • Rejection from close friends
Scales specific for PLHIV			
Self-stigma	7	0-7	In the past year, have you: • Felt ashamed of your HIV status • Felt guilty of your HIV status • Blamed yourself for your HIV status • Blamed others for your HIV status • Felt less worthy (low self-esteem) for your HIV status • Felt you should be punished for your HIV status • Felt suicidal because of your HIV status



Changes in social interactions (and professional life goals)	5	0-5	In the past year, have you: • Chosen not to attend social gathering(s) • Isolated myself from my family and/or friends • Took the decision to stop working • Decided not to apply for a job/work or for a promotion • Withdrew from education/training or did not take up an opportunity for education/ training
Changes in personal life goals	3	0-3	In the past year, have you: • Decided not to get married • Decided not to have sex • Decided not to have (any more) children
Experiences of discrimination	18	0-18	Isolation social exclusion • Been excluded from a social gathering • Been abandoned by spouse or partner • Been abandoned by family • Been no longer visited or less visited by family and friends • Been isolated in the household • Been physically assaulted • Been threatened with violence • Faced sexual rejection from spouse Verbal Stigma • Been teased, insulted or sworn at • Been gossiped about Loss of identity/role • Lost respect or standing within the family or community • Been denied religious rites and services Loss of access to resources livelihood • Lost housing or not been able to rent housing • Lost customers to buy product/goods or lost job • Been denied promotion or further training • Had property taken away Access to health services • Been denied health services • Been given poor quality of health services



Table 3. Reliability (Cronbach's alpha) of the key scales/constructs in study populations			
Category of study population	HIV transmission misconceptions	Symbolic stigma	Endorsing Discrimination against PLHIV
General Population	.82	.61	.79
Health care workers	.53	.76	.68
IDUs	.86	.68	.88
MSM	.89	.79	.91
TG people	.90	.79	.92
FSWs	.82	.33	.49

Data Analysis

Data analysis was conducted using IBM SPSS (version 20). Frequency distributions were generated for all relevant variables across the populations.

Responses on the 5 point Likert type scales (e.g., strongly agree, agree, neutral, disagree, strongly disagree) or dichotomous items (e.g., 'yes' or no') that were used to capture various forms of stigma and consequences of stigma were scored to arrive at a raw stigma score for each individual. Then mean raw scores were calculated for the various scales for different study populations. To compare the scores of scales with varying number of items, the scores were standardized by converting them into 'Index score' (Index score = actual raw score / maximum raw score for that scale), which ranged from 0 to 1. Similar to the interpretation of raw scores, a higher index score means higher levels of HIV/AIDS related misconceptions, and higher levels of enacted stigma (discrimination), symbolic stigma and internalised stigma.

Independent samples t-test was used for comparison of means (mean raw or index scores) of two groups within a population (example, males and females within GP or clinical and non-clinical staff within HCWs) and one-way ANOVA was used for comparisons of means of three or more groups (e.g., four KP subgroups). Linear regression was used to predict the outcome variables such as 'endorsement of discriminatory actions' with index scores of the scales that measured instrumental or symbolic stigma.



Box 2. Interpretation of index scores

Throughout this report, index scores are used (in addition to or instead of raw scores) for the various scales/constructs such as HIV transmission misconceptions, symbolic stigma, endorsement of discrimination against PLHIV and self-stigma. As the individual scales/constructs have different number of items, it is difficult to compare the scores of participants or groups in terms of raw scores on the different scales. Creation of Index score addresses this issue and allows for making meaningful comparisons of scores from different scales/constructs between two or more groups.

Index score of a participant on a particular scale

$$= \frac{\text{Actual raw score of the participant on the scale}}{\text{Maximum possible raw score on the scale}}$$

Index score of a group (example: health care workers) on a particular scale

$$= \frac{\text{Mean raw score of the HCWs on the scale}}{\text{Maximum possible raw score on the scale}}$$

By the very nature of the above formula, maximum possible index score becomes 1, as a participant or a group cannot score more than the maximum possible score on a particular scale. Index score can also be interpreted in terms of percentage. For example, if a participant's (or a group's) index score on symbolic stigma scale is .40, participant or group has scored 40% of the maximum possible score for symbolic stigma. Thus, the higher the value, the higher the participant's or group's scores on symbolic stigma scale.



FINDINGS

General Population (GP)

Socio-demographic characteristics

The GP sample included almost equal proportions of men and women. About two-thirds of the respondents were in the age group of 18 to 35 years. Three-fourths had studied up to high school and above, with slightly more male respondents better educated. About three-fifths were married. Only one-tenth of respondents mentioned they knew of a person living with HIV.

Table 4. Socio-demographic and other characteristics of GP respondents

Demographic characteristics	Males (N=4025)	Females (N=3962)	Total (N=7987)
	n (%)	n (%)	n (%)
Age (years)			P<.001
18-35	2723 (67.7)	2872 (72.5)	5595 (70.1)
36-56	1302 (32.3)	1090 (27.5)	2392 (29.9)
Education			P=.08
< High school	922 (22.9)	1162 (29.3)	2084 (26.1)
> High school	3103 (77.1)	2800 (70.7)	5903 (73.9)
Marital status			P=.83
Currently married	2443 (60.7)	2414 (60.9)	4857 (60.8)
Single	1582 (39.3)	1548 (39.1)	3130 (39.2)
Occupation			P<.0001
Blue-collar job	977 (24.7)	269 (6.9)	1246 (15.8)
Business	1037 (26.3)	195 (5.0)	1232 (15.7)
White-collar job	587 (14.9)	260 (6.6)	847 (10.8)
Unemployed/Student	1348 (34.1)	3197 (81.5)	4545 (57.8)
Know PLHIV			P=.07
Yes	449 (11.2)	394 (9.9)	843 (10.6)
No	3576 (88.8)	3568 (90.1)	7144 (89.4)

HIV Transmission Misconceptions

Over two-thirds of the sample disagreed with most items that assessed the perceived chances of contracting HIV due to exposure to body fluids of PLHIV or by casual physical contact with them (Table 5).



Knowledge of risk of HIV infection from exposure to body fluids

About two-thirds of male and female GP respondents disagreed that there was risk of HIV due to exposure to sweat or excreta of PLHIV (75% and 67%, respectively). Thus, one-third had a misconception that they could get HIV if they were exposed to sweat (24%) or excreta (32%) of PLHIV. Also, about two-fifths (40%) had a misconception that there was risk of HIV if they were exposed to saliva from PLHIV.

Knowledge of risk of HIV infection from casual contact (physical proximity)

A significant proportion of participants wrongly thought that HIV can be transmitted through casual contact. A little more than one-third (37%) agreed that there was risk of HIV infection in sharing toilets with PLHIV. But less than one-tenth agreed that there was risk of HIV in sharing a room with PLHIV or from coming in contact with items touched by PLHIV. About two-fifths agreed that there was risk of children contracting HIV by playing with children living with HIV. Women had significantly higher misconceptions scores than men ($p<.001$).

Table 5. General Population: HIV transmission misconceptions

Scores	Males (N=4025)		Females (N=3962)		Total (N=7987)	
	Mean (SD)		Mean (SD)		Mean (SD)	
Mean raw score (0-7) (t-test: $p<.001$)	2.07 (2.17)		2.27 (2.21)		2.17 (2.19)	
Mean index score	.29 (.31)		.32 (.31)		.30 (.31)	
Items	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Statement: "You could become infected with HIV..."	Agree*	Don't agree	Agree	Don't agree	Agree	Don't agree
Exposure to body fluids						
If you are exposed to saliva of PLHIV	1537 (38.2)	2488 (61.8)	1681 (42.4)	2281 (57.6)	3218 (40.3)	4769 (59.7)
If you are exposed to sweat of PLHIV	941 (23.4)	3084 (76.6)	1012 (25.5)	2950 (74.5)	1953 (24.5)	6034 (75.5)
If you are exposed to excreta of PLHIV	1224 (30.4)	2801 (69.6)	1344 (33.9)	2618 (66.1)	2568 (32.2)	5419 (67.8)
Casual contact (physical proximity)						
If you share a hospital room with PLHIV	807 (20.0)	3218 (80.0)	792 (20.0)	3170 (80.0)	1599 (20.0)	6388 (80.0)
By sharing a toilet	1405	2620	1582	2380	2987	5000



with PLHIV	(34.9)	(65.1)	(39.9)	(60.1)	(37.4)	(62.6)
By touching items that	622	3403	634	3328	1256	6731
have been touched by PLHIV	(15.5)	(84.5)	(16.0)	(84.0)	(15.7)	(84.3)
A child could become	1789	2236	1939	2023	3728	4259
infected with HIV if they play with a child who has HIV	(44.4)	(55.6)	(48.9)	(51.1)	(46.7)	(53.3)
*includes 'don't know' as well						

Symbolic stigma

In general, symbolic stigma was high among GP (mean index score=.55), with no significant differences between men and women.

Table 6. Symbolic stigma: Items and Scores (GP respondents)

Scale scores	Males (N=4025)		Females (N=3962)		Total (N=7987)	
	Mean (SD)		Mean (SD)		Mean (SD)	
Mean raw score (0-7) (t-test, p=.10)	3.82 (1.83)		3.89 (1.81)		3.85 (1.82)	
Mean index score	.54 (.26)		.55 (.26)		.55 (.26)	
Items	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
	Disagree	Agree	Disagree	Agree	Disagree	Agree
Judgement and Blame						
HIV is a punishment from God	3350 (83.2)	667 (16.6)	3224 (81.4)	731 (18.5)	6574 (82.3)	1398 (17.5)
HIV/AIDS is a punishment for bad behaviour	1417 (35.2)	2597 (64.5)	1298 (32.8)	2658 (67.1)	2715 (34.0)	5255 (65.8)
It is women in sex work who spread HIV in the community	1382 (34.3)	2631 (65.4)	1366 (34.5)	2583 (65.2)	2748 (34.4)	5214 (65.3)
People with HIV are promiscuous	1835 (45.6)	2158 (53.6)	2231 (43.1)	4389 (56.3)	3542 (55.0)	4389 (44.3)
Promiscuous men spread HIV in our community	1523 (37.8)	2482 (61.7)	1426 (36.0)	2497 (63.0)	2949 (36.9)	4979 (62.3)



Shame						
I would be ashamed if I were infected with HIV	1541 (61.4)	2470 (37.8)	1497 (61.5)	2438 (38.0)	3038 (61.4)	4908 (38.3)
I would be ashamed if someone in my family had HIV/AIDS	1659 (41.2)	2358 (58.6)	1680 (42.4)	2253 (56.9)	3339 (41.8)	4611 (57.7)

Judgment and Blame

There was high consensus among the GP respondents on the blame and judgment statements, as about two thirds (65%) of the respondents agreed that female sex workers are responsible for spreading HIV in the society and more than half (55%) endorsed the statement that PLHIV are promiscuous. Nearly two-thirds (62%) of the respondents blamed promiscuous men for spreading HIV in the society. Two-thirds (66%) believed HIV was a punishment to PLHIV for their bad behaviour. Men and women gave similar responses to judgement statements.

Shame

Nearly three-fifths of the respondents agreed to the statements that they would be ashamed if they became infected with HIV (61%) or if someone in their family had HIV (58%). No differences by gender were observed.

Endorsement of discriminatory actions against PLHIV

To assess their intentions to discriminate against PLHIV, the respondents were asked to indicate their approval or disapproval of various discriminatory acts against PLHIV (that is, whether they would approve or disapprove if PLHIV were treated differently in their presence or neighbourhood). About two-third of the GP respondents did not approve of the discriminatory acts against PLHIV with the approval ratings being in the range of 6 % to 14% on all items (Table 7). The most agreed indicators were with respect to the relationship between the PLHIV and the community. About one-tenth (13%) approved of PLHIV being 'excluded from social gathering' and 12% approved of them being 'kept separate from the community'. Most respondents did not approve of abandonment by spouse/partner or PLHIV being teased or sworn at.

Table 7. Endorsement of discriminatory actions against PLHIV: Scores and Item frequencies (GP respondents)									
Scores	Mean (SD)			Mean (SD)			Mean (SD)		
Raw score (Range: 0-10)	1.79 (2.38)			1.96 (2.48)			1.88 (2.43)		
Index score	.17 (.23)			.19 (.24)			.18 (.24)		
	Males (n=4025)			Females (n=3962)			Total (N=7987)		
Items	Approve	Neutral	Disapprove	Approve	Neutral	Disapprove	Approve	Neutral	Disapprove
Abandoned by spouse/partner	349 (8.7)	486 (12.1)	3190 (79.3)	362 (9.1)	510 (12.9)	3090 (78.0)	711 (8.9)	996 (12.5)	6280 (78.6)

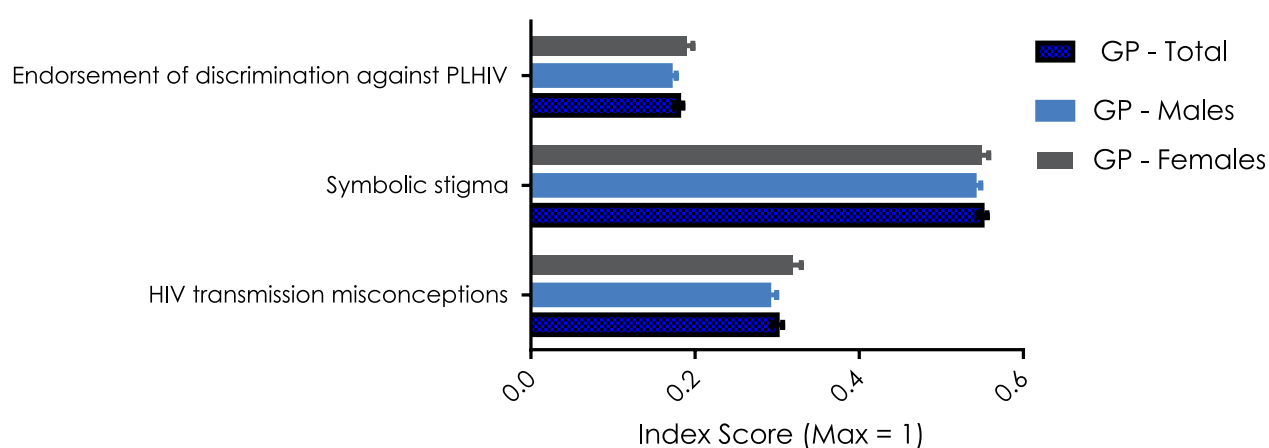


Teased or sworn at	250 (6.2)	756 (18.8)	3019 (75.0)	285 (7.2)	783 (19.8)	2894 (73.0)	535 (6.7)	1539 (19.3)	5913 (74.0)
Isolated within the household	365 (9.1)	644 (16.0)	3016 (74.9)	349 (8.8)	701 (17.7)	2912 (73.5)	714 (8.9)	1345 (16.8)	5928 (74.2)
Kept separate from the community	459 (11.4)	845 (21.0)	2721 (67.6)	535 (13.5)	885 (22.3)	2542 (64.2)	994 (12.4)	1730 (21.7)	5263 (65.9)
Excluded from a social gathering	476 (11.8)	687 (17.1)	2862 (71.1)	562 (14.2)	713 (18.0)	2687 (67.8)	1038 (13.0)	1400 (17.5)	5549 (69.5)

Comparison of index scores of men and women

Comparison of index scores between men and women showed no significant differences in the scores on symbolic stigma scale. However, women had significantly higher HIV transmission misconceptions and more likely than men to endorse discriminatory actions against PLHIV.

Figure 2. Summary of index scores of GP respondents



Factors associated with 'endorsement of discrimination against PLHIV' in GP respondents

Among GP respondents, higher levels of symbolic stigma and stronger HIV transmission misconceptions were associated with stigmatising responses, i.e., endorsement of discrimination towards PLHIV. People who knew some PLHIV had lower levels of endorsement of discriminatory actions against PLHIV than who did not know any PLHIV. When compared with men, women scored higher on stigmatising responses.



Table 8. Multiple linear regression results for 'endorsement of discrimination against PLHIV' among GP respondents (N=7987)

Variables	Endorsement of discrimination against PLHIV		
	B	SE	β
Age group ($<35=0$, $>36=1$)	.006	.007	.010
Sex (Females=0, Males=1)	-.011	.005	-.022*
Education ($<\text{High school}=0$, $>\text{High school}=1$)	-.011	.006	-.019
Marital status (Single=0, Married=1)	.000	.006	.001
Know of someone who is living with HIV (No=0, Yes=1)	-.026	.009	-.033**
HIV Transmission Misconceptions (Index Score)	.160	.009	.205***
Symbolic stigma (Index score)	.139	.010	.148***
Adjusted R2	.07		
*p<.05, **p<.01, ***p<.001 (Note: Although the explained variance was low (7%), the overall model was statistically significant)			

Key Populations (KPs)

Socio-demographic characteristics

Most of the participants in all the subgroups belonged to younger age group (<35 years). Majority of the respondents reported primary or higher levels of education – except female sex workers (FSWs), among whom nearly half (46%) were illiterate. More than half of the IDUs and FSWs were currently married, and more than half of MSM and TG people were single. In general, a higher proportion of IDUs (77%) and TG (61%) respondents reported knowing someone living with HIV, when compared with MSM and FSWs.

Table 9. Socio-demographic and other characteristics of KP respondents

Demographic Characteristics	IDUs (N=681)	MSM (N=494)	TG people (N=254)	FSWs (N=208)
	n (%)	n (%)	n (%)	n (%)
Gender				
Man	588 (86.3)	494 (100)		
Woman	93 (13.7)			208 (100)
TG			254 (100)	
Age (years)				P<.001



18-25	107 (15.7)	236 (47.8)	107 (42.1)	89 (44.5)
26-35	276 (40.5)	136 (27.5)	97 (38.2)	90 (45.0)
>36	298 (43.8)	122 (24.7)	50 (19.7)	21 (10.5)
Education				P<.001
Illiterate	170 (25.0)	41 (8.3)	45 (17.7)	93 (46.5)
< High School	309 (45.4)	190 (38.4)	129 (50.8)	88 (44.0)
> High school	202 (29.6)	263 (53.3)	80 (31.5)	19 (9.5)
Marital status				P<.001
Currently married	410 (60.2)	186 (37.7)	69 (27.2)	112 (56.0)
Single	271 (39.8)	308 (62.3)	185 (72.8)	88 (44.0)
Know PLHIV				P<.001
Yes	529 (77.7)	204 (41.3)	157 (61.8)	30 (15.0)
No	152 (22.3)	290 (58.7)	97 (38.2)	170 (85.0)
p-values are from Chi-square tests				

HIV Transmission Misconceptions

Exposure to non-blood body fluids

In general, most of the KP subgroups seemed to believe that exposure to non-blood bodily fluids such as saliva, excreta and sweat can result in contracting HIV. For example, between 33% and 49% of KPs, reported exposure to saliva of a PLHIV can result in contracting HIV.

Casual contact (Sharing rooms or touching)

In general, when compared to IDUs, a higher proportion of FSWs, MSM and TG people endorsed that there is risk of HIV transmission by sharing rooms with PLHIV or touching items of PLHIV. About two-thirds of FSWs and more than one-third of MSM and TG people endorsed that 'HIV can be transmitted to children if they played with a child living with HIV'.

Scores

An index score was created to measure the magnitude of misconceptions among the various subgroups. The scores (both the raw scores and index scores) are summarized in Table 10. The higher the scores, the higher the misconceptions. FSWs had higher scores than every other group, and IDUs had the lowest scores (p<.001).



Table 10. HIV transmission misconceptions among KPs								
	IDUs (N=681)		MSM (N=494)		TG (N=254)		FSWs (N=208)	
	Yes*	No	Yes*	No	Yes*	No	Yes*	No
	Mean (SD)		Mean (SD)		Mean (SD)		Mean (SD)	
Raw Score: (Range: 0-7) (One-way ANOVA: p<.001)	1.50 (2.11)		2.49 (2.58)		2.38 (2.62)		3.65 (2.37)	
Index Score	.21 (.30)		.35 (.37)		.37 (.37)		.52 (.33)	
Items	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Statement: "You could become infected with HIV..."								
Exposure to non-blood body fluids								
If you are exposed to saliva of PLHIV	225 (33.0)	456 (67.0)	245 (49.6)	249 (50.4)	120 (47.2)	134 (52.8)	76 (38.0)	124 (62.0)
If you are exposed to sweat of PLHIV	157 (23.1)	524 (76.9)	153 (31.0)	341 (69.0)	97 (38.2)	157 (61.8)	82 (41.0)	118 (59.0)
If you are exposed to excreta of PLHIV	185 (27.2)	496 (72.8)	210 (42.5)	284 (57.5)	89 (35.0)	165 (65.0)	68 (34.0)	132 (66.0)
Casual contact (Sharing rooms or touching)								
If you share a hospital room with PLHIV	126 (18.5)	555 (81.5)	134 (27.1)	360 (72.9)	66 (26.0)	188 (74.0)	126 (61.0)	74 (37.0)
By sharing a toilet with PLHIV	103 (15.1)	578 (84.9)	153 (31.0)	341 (69.0)	70 (27.6)	184 (72.4)	122 (61.0)	78 (39.0)
By touching items that have been touched by PLHIV	86 (12.6)	595 (87.4)	144 (29.1)	350 (70.9)	72 (28.3)	182 (71.7)	128 (64.0)	72 (36.0)
A child could become infected with HIV if they play with a child who has HIV	141 (20.7)	540 (79.3)	189 (38.3)	305 (61.7)	90 (35.4)	164 (64.6)	129 (64.5)	71 (35.5)
*includes 'don't know' as well								

Symbolic stigma

The summary of raw scores and index scores for symbolic stigma is presented in Table 11, along with the frequencies/percentages of responses.

No clear patterns emerged in terms of differences in the responses to the statements to measure symbolic stigma among different subgroups. In general, when compared to other groups, a lower proportion of FSWs agreed that HIV is a punishment from God or a punishment for bad behaviour, and a higher proportion of IDUs agreed that HIV is a punishment for bad behaviour. Similarly, a lower proportion of FSWs agreed to the statement 'It is FSWs who spread HIV', when compared to other groups. However, a significant proportion (about two-fifth to more than half) of all



subgroups agreed that 'people with HIV are promiscuous'. While more than half of IDUs and MSM agreed that 'promiscuous men spread HIV', only about one-third of TG people and FSWs agreed with that statement. In relation to shame, a significant proportion of FSWs (68%) agreed that they would be ashamed if they or someone in their family have HIV, when compared with other subgroups.

Table 11. Symbolic stigma scores and item frequencies for KPs

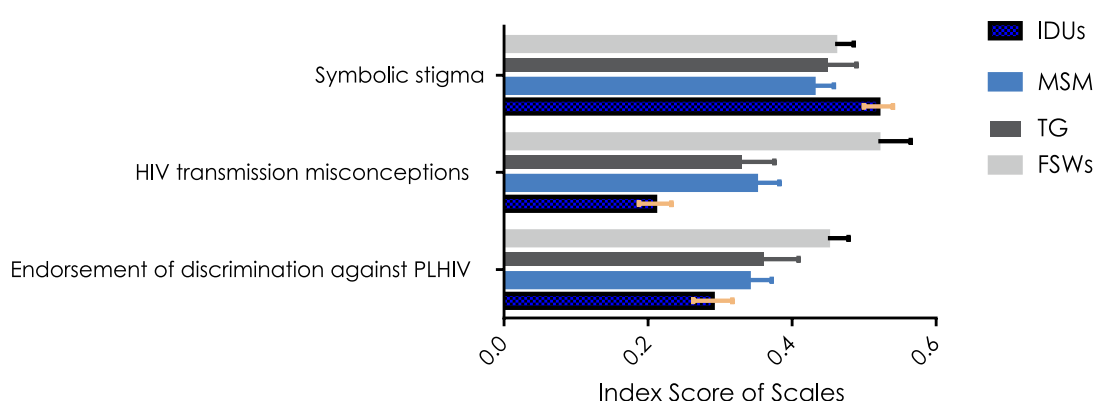
Scores	IDUs (N=681)		MSM (N=494)		TG (N=254)		FSW (N=208)	
	Mean (SD)		Mean (SD)		Mean (SD)		Mean (SD)	
Total raw score: Mean (SD), Range=0 to 7	3.70 (1.92)		3.06 (2.29)		3.21 (2.30)		3.23 (1.35)	
Total index score: Mean (SD)	.52 (.27)		.43 (.32)		.45 (.32)		.46 (.19)	
Items	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree
Judgmental values								
HIV is a punishment from God	531 (78.0)	150 (22.0)	327 (66.2)	167 (33.8)	141 (55.5)	113 (44.5)	173 (88.7)	22 (11.3)
HIV/AIDS is a punishment for bad behaviour	185 (27.2)	496 (72.8)	286 (57.9)	208 (42.1)	119 (46.9)	135 (53.1)	139 (69.5)	61 (30.5)
Blame								
It is female sex workers who spread HIV in the society	230 (33.8)	451 (66.2)	220 (44.5)	274 (55.5)	94 (37.0)	160 (63.0)	108 (54.0)	92 (46.0)
People with HIV are promiscuous	326 (47.9)	355 (52.1)	262 (53.0)	232 (47.0)	143 (56.3)	111 (43.7)	19 (9.5)	181 (90.5)
Promiscuous men spread HIV in our community	192 (28.2)	489 (71.8)	231 (46.8)	263 (53.2)	150 (59.1)	104 (40.9)	139 (69.5)	61 (30.5)
Shame								
I would be ashamed if I were infected with HIV	383 (56.2)	298 (43.8)	300 (60.7)	194 (39.3)	160 (63.0)	94 (37.0)	63 (31.5)	137 (68.5)
I would be ashamed if someone in my family had HIV/AIDS	402 (59.0)	279 (41.0)	318 (64.4)	176 (35.6)	156 (61.4)	98 (38.6)	107 (53.5)	93 (46.5)

Endorsement of discriminatory actions against PLHIV

The summary of raw scores and index scores for endorsement of discriminatory actions against PLHIV is presented in Table 12, along with the frequencies/percentages of responses. The higher the raw and index scores, the higher the stigmatising responses.

In general, there was no significant difference among the subgroups in endorsement of discriminatory actions against PLHIV, with only up to one-third (24% to 33%) endorsing discriminatory actions against PLHIV. One significant difference was noted in FSWs when compared with other subgroups in relation to 'rejection' (rejection from brothels), which was endorsed by only 7%. This could be possibly because the FSW participants did not want FSWs to lose livelihood and community support.

Figure 3. Summary of index scores of KPs: Endorsement of discrimination against PLHIV, symbolic stigma and HIV transmission misconceptions



Factors associated with 'endorsement of discrimination against PLHIV' among key populations

Multiple linear regression, across all 4 groups, showed that HIV transmission misconceptions was a significant variable (stronger misconceptions are associated with higher stigmatising responses). However, symbolic stigma was significant predictor only for MSM and TG people (higher symbolic stigma scores are associated with more stigmatising responses), not for IDUs and FSWs.

Table 12: Endorsement of discriminatory actions against PLHIV: Scores and Item frequencies (KPs)

Scores	IDUs (N=681)			MSM (N=494)			TG (N=254)			FSWs (N=208)		
	Mean (SD)			Mean (SD)			Mean (SD)			Mean (SD)		
Raw score (Range: 0-10)	2.95 (3.65)			3.41 (3.63)			3.64 (4.00)			4.57 (2.14)		
Index score	.29 (.36)			.34 (.36)			.36 (.40)			.45 (.21)		
Items	Appr- ove	Neu- tral	Disap- prove	Appr- ove	Neu- tral	Disap- prove	Appr- ove	Neu- tral	Disap- prove	Appr- ove	Neu- tral	Disap- prove
Abando- ned by spouse/ partner	211 (31.0)	28 (4.1)	442 (64.9)	147 (29.8)	100 (20.2)	247 (50.0)	87 (34.3)	30 (11.8)	137 (53.9)	41 (29.1)	59 (41.8)	41 (29.1)



Teased or sworn at	202 (29.7)	30 (4.4)	449 (65.9)	99 (20.0)	70 (14.2)	325 (65.8)	80 (31.5)	14 (20.0)	160 (63.0)	37 (26.2)	59 (41.8)	45 (31.9)
Isolated within the household	187 (27.5)	18 (2.6)	476 (69.9)	142 (28.7)	80 (16.2)	272 (55.1)	85 (33.5)	18 (7.1)	151 (59.4)	43 (30.5)	57 (40.4)	41 (29.1)
Kept separate from the community	172 (25.3)	31 (4.6)	478 (70.2)	111 (22.5)	94 (19.0)	289 (58.5)	80 (31.5)	20 (7.9)	154 (60.6)	47 (33.3)	55 (39.0)	39 (27.7)
Rejection*	164 (24.1)	32 (4.7)	485 (71.2)	121 (24.5)	99 (20.0)	274 (55.5)	78 (30.7)	22 (8.7)	154 (60.6)	10 (7.1)	58 (41.1)	73 (51.8)

*This item was different for the different subgroups to suit their living context. It was, 'rejection by close friends' for MSM and TG, 'rejection within brothel' for FSWs, and 'rejection or denial of services within detox centre' for IDUs.

Table 13. Multi-linear regression results for 'endorsement of discrimination against PLHIV' among key populations

Variables	IDUs (N=681)			MSM (N=494)			TG (N=254)			FSWs (N=208)		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Age ($<35=0$, $>36=1$)	.054	.027	.074*	-.055	.034	-.065	-.004	.050	-.004	.060	.058	.092
Education ($<\text{High school}=0$, $>\text{High school}=1$)	-.288	.029	-.360***	-.084	.026	-.116**	.009	.043	.010	.136	.052	.318**
Marital status ($\text{Unmarried}=0$, $\text{Married}=1$)	-.095	.027	-.127**	.097	.030	.129**	.171	.045	.190***	-.064	.036	-.148
Know of someone living with HIV (No=0, Yes=1)	.068	.031	.077*	.063	.026	.086*	.043	.041	.053	.055	.064	.077
HIV transmission misconceptions (Index Score)	.242	.045	.200***	.338	.044	.344***	.430	.066	.403***	.182	.052	.297**
Symbolic stigma (Index score)	.015	.050	.011	.340	.050	.308***	.353	.076	.291***	.193	.174	.136
Adjusted R2	.19			.11			.38			.42		

* $p<.05$, ** $p<.01$, *** $p<.001$



People Living with HIV (PLHIV)

Socio-demographic characteristics

The sample had a relatively higher proportion of women (62%) than men. Majority of the respondents (66%) were in the age group of 18 to 35, and three-fifths (62%) had studied less than high school. More than half were married and employed, and a majority (88%) reported staying with their parents, spouses and in-laws. When compared with men, more women stayed with their in-laws (28.2% vs. 3.1%) or alone (16.8% vs. 6.9%). A higher proportion of women were younger (72%) than men, and a relatively higher proportion of women were divorced or widowed when compared with men. An equal proportion of men and women were employed, although a relatively higher proportion of men than women had full-time jobs.

Table 14. Socio-demographic characteristics of PLHIV

Demographic characteristics	Males (N=620; 38.1%)	Females (N=1010; 61.9%)	Total (N=1630)
	n (%)	n (%)	n (%)
Age (years)			P<.001
18-35	350 (56.5)	725 (71.8)	1075 (66.0)
36-56	270 (43.5)	285 (28.2)	555 (34.0)
Education			P=.03
Less than High school	364 (58.7)	648 (64.2)	1012 (62.1)
High school and more	256 (41.3)	362 (35.8)	618 (37.9)
Marital status			P<.0001
Married	423 (68.2)	417 (41.3)	840 (51.5)
Unmarried/Single	130 (21.0)	57 (5.6)	187 (11.5)
Divorce/Separated	63 (10.2)	335 (33.2)	398 (24.4)
Widowed	4 (6)	201 (19.9)	205 (12.6)
Occupation			P<.0001
Unemployed	88 (14.4)	176 (17.6)	264 (16.4)
Part-time job	217 (35.6)	190 (19.0)	407 (25.3)
Full-time job	167 (27.4)	180 (18.0)	347 (21.6)
Business	138 (22.6)	452 (45.3)	590 (36.7)



Living status			P<.0001
Spouse	276 (45.5)	271 (28.4)	547 (35.0)
Parents	267 (44.0)	242 (25.4)	509 (32.6)
In-laws	19 (3.1)	269 (28.2)	288 (18.4)
Alone	42 (6.9)	160 (16.8)	202 (12.9)
Friends	3 (.5)	12 (1.3)	15 (1.0)

Years since HIV diagnosis

About three-quarters of the respondents reported they had known their HIV status for one year and above. About one-fourth of men and one-fifth of women had known their HIV status for less than a year. A significantly larger proportion of women than men reported knowing their HIV diagnosis for five years and above (41% vs. 33%).

Disclosure of HIV status

Almost all PLHIV mentioned that some other persons know of their HIV status. About half (49%) of the women and about two-fifths (43%) of the men reported that their spouse knew of their HIV status. Among the currently married participants, a higher proportion of men than women (70% vs. 40%) reported having disclosed their HIV status to their spouse. Lower levels of disclosure to spouse among HIV-positive women may be explained on the basis of their testing for HIV after their husband was found to be HIV-positive. In most such cases, women have no control over the disclosure of their serostatus. Among the divorced participants, a higher proportion of women than men (33% vs. 10%) reported having disclosed their HIV status to their spouse. A little more than one-third (37%) reported that their parents knew of their status, followed by in-laws (6%) and relatives (5%).

Discrimination (Enacted stigma)

Scores

For the 18 items that were included in the analysis, a majority of participants reported having experienced one or more of the items. Discrimination scores – both raw mean score and index mean score – were calculated for each participant. The total mean index score of the sample was .23, with women having significantly higher mean scores compared to men (.26 vs. .18, $p<.01$). That is, women experienced more discrimination than men.

Extent of experiences of various discriminatory incidents (in the previous year)

The experiences reported by PLHIV (18 items) in the past one year are summarised below.

Social exclusion

Discriminatory incidents related to isolation and social exclusion by family and community were commonly experienced (10% to 33%). For example, about one-fourth (28%) reported having been excluded from social gathering, and about one-



fifth (22%) reported having being isolated in their own household.

Threat, violence and gossip

About 17% were threatened with violence and 13% had experienced physical assault. About half reported being gossiped about by others.

Loss of access to resources and livelihoods

About one-tenth reported loss of job or customer, 6% reported not getting promotion or training and about one-fourth reported loss of property.

Loss of social status/role

About one-third (38%) reported loss of respect within their family or community and about one-fourth reported being denied religious rites or services.

Discrimination in health settings

About one-fifth and one-third reported to have been denied care or received suboptimal health care, respectively.

Differences in the experiences of men and women

In general, a relatively higher proportion of women experienced each form of discrimination. More women than men (32% vs. 22%) reported being excluded from social gathering and having lost respect in the community (40% vs. 30%). Similarly, more women than men (16% vs. 11%) reported having been abandoned by their spouse or partner. About one-fourth of women were threatened with violence compared to 7% of men, and 17% of women had actually been physically assaulted compared to 6% of men. Similarly, more women than men (28% vs. 14%) reported being deprived of their property by their relatives. In relation to health care, a higher proportion of women than men reported denial of care or having received suboptimal care (women: 25% and 42%; and men: 11% and 30%, respectively).

Magnitude of discrimination faced by women living with HIV (in the previous year): Comparison by their marital status

The mean index scores of discrimination for women living with HIV by their marital status are presented in Table 15. The differences among the mean index scores were tested with one-way ANOVA and post-hoc comparisons (Bonferroni test). In general, widowed women had experienced more number of discriminatory incidents than women who were married, single or divorced ($p < .001$). When compared with married women, divorced women had experienced significantly more number of discriminatory incidents ($p < .001$). However, there were no significant differences between single and married women ($p = .27$).



Table 15. Mean index scores of discrimination (enacted stigma) for women living with HIV by their marital status

	Number (%)	Mean	SD
Total (All women)	1010	.26	.24
Married	417 (41.2)	.19	.21
Single	57 (5.6)	.26	.26
Divorced/Separated	335 (34.6)	.25	.21
Widowed	201 (19.9)	.43	.24

Figure 4. Experience of discrimination (mean index scores) among women living with HIV by marital status

(Note: Error bars are 95% CI)

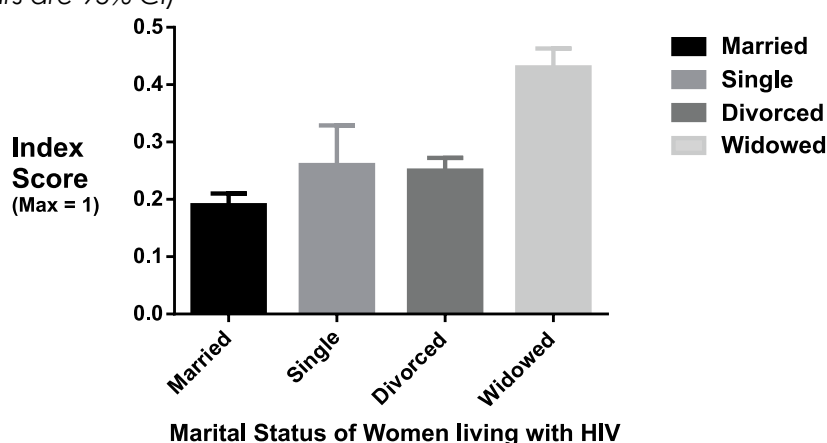


Table 16. Experiences of discrimination in the previous year

Scores	Males (N=620)		Females (N=1010)		All PLHIV (N=1630)	
	Mean (SD)		Mean (SD)		Mean (SD)	
Total raw score: (Range: 0-18) (t-test: p<.01)	3.25 (3.95)		4.79 (4.35)		4.21 (4.27)	
Index score	.18 (.21)		.26 (.24)		.23 (.23)	
Items	No	Yes	No	Yes	No	Yes
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Isolation/social exclusion						
Been excluded from a social gathering	487 (78.5)	133 (21.5)	690 (68.3)	320 (31.7)	1177 (72.2)	453 (27.8)
Been abandoned by spouse or partner	535 (88.7)	68 (11.3)	828 (83.5)	164 (16.5)	1363 (85.5)	232 (14.5)
Been abandoned by family	478 (78.9)	128 (21.1)	700 (71.0)	286 (29.0)	1178 (74.0)	414 (26.0)



Been no longer visited or less visited by family and friends	424 (68.8)	192 (31.2)	668 (66.7)	334 (33.3)	1092 (67.5)	526 (32.5)
Been isolated in the household	522 (84.9)	93 (15.1)	724 (72.5)	275 (27.5)	1246 (77.2)	368 (22.8)
Lost housing or not been able to rent housing	567 (93.9)	37 (6.1)	809 (86.0)	132 (14.0)	1376 (89.1)	169 (10.9)
Faced sexual rejection from spouse	487 (82.0)	107 (18.0)	740 (74.9)	248 (25.1)	1227 (77.6)	355 (22.4)
Violence, Threat and Gossip						
Been physically assaulted	575 (93.6)	39 (6.4)	829 (83.1)	169 (16.9)	1404 (87.1)	208 (12.9)
Been threatened with violence	573 (92.9)	44 (7.1)	758 (75.6)	244 (24.4)	1331 (82.2)	288 (17.8)
Been teased, insulted or sworn at	457 (74.2)	159 (25.8)	661 (66.0)	341 (34.0)	1118 (69.1)	500 (30.9)
Been gossiped about	381 (61.8)	236 (38.2)	438 (44.0)	557 (56.0)	819 (50.8)	793 (49.2)
Loss of social status/role						
Lost respect or standing within the family or community	433 (70.2)	184 (29.8)	595 (59.3)	408 (40.7)	1028 (63.5)	592 (36.5)
Been denied religious rites and services	486 (78.4)	134 (21.6)	715 (71.1)	290 (28.9)	1201 (73.9)	424 (26.1)
Loss of resources/livelihood						
Lost customers to buy product/goods or lost job	530 (87.3)	77 (12.4)	870 (93.0)	65 (7.0)	1400 (90.8)	142 (9.2)
Been denied promotion/ further training	562 (93.0)	42 (6.8)	876 (86.7)	52 (5.6)	1438 (93.9)	94 (6.1)
Had property taken away	528 (86.0)	86 (14.0)	711 (71.2)	287 (28.8)	1239 (76.9)	373 (23.1)
Denial of or suboptimal health care						
Been denied health services	546 (88.2)	73 (11.8)	757 (75.7)	243 (24.3)	1303 (80.5)	316 (19.5)
Been given poor quality of health services	424 (69.9)	183 (30.1)	577 (57.5)	426 (42.5)	1001 (62.2)	609 (37.8)

Self-stigma

In this study, negative self-image, feelings of shame, blame and guilt were some of the indicators used to measure self-stigma. More than half (57%) reported that they felt ashamed of their HIV status, while about one-third (35%) blamed themselves for their HIV status and two-fifths (43%) reported feeling guilty about it.

Gender differences in self-stigma were observed. Feelings of self-blame and deserving punishment were observed more among women than men (45% vs. 17%; 33% vs. 19%, respectively). Feelings of shame and low self-esteem too were observed more among women than men (60% vs. 52%; 25% vs. 19%). In contrast, more men reported



feeling guilty as compared to women (60% vs. 32%). This is possibly because, in a marital relationship, it is often the men who 'bring HIV into the family' than women (based on the findings from other studies in India). Suicidal thoughts were low (13%).

A comparison of self-stigma scores showed that women had significantly higher scores compared to men ($p < .05$).

Table 17. Self-stigma among men and women living with HIV: Scores and Item frequencies						
Scores	Males (N=620)		Females (N=1010)		All PLHIV (N=1630)	
	Mean (SD)		Mean (SD)		Mean (SD)	
Total raw score (Range: 0-7) (t-test: $p < .01$)	2.22 (1.83)		2.58 (2.02)		2.44 (1.95)	
Index score	.31 (.26)		.36 (.28)		.34 (.27)	
Items	No	Yes	No	Yes	No	Yes
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Felt ashamed of your HIV status	289 (47.1)	325 (52.9)	398 (39.7)	605 (60.3)	687 (42.5)	930 (57.5)
Felt guilty of your HIV status	240 (39.1)	374 (60.9)	652 (67.3)	317 (32.7)	892 (56.3)	691 (43.7)
Blamed yourself for your HIV status	500 (82.2)	108 (17.8)	542 (54.3)	456 (45.7)	1042 (64.9)	564 (35.1)
Blamed others for your HIV status	355 (58.3)	254 (41.7)	508 (51.0)	488 (49.0)	863 (53.8)	742 (46.2)
Thought of low of yourself (low self-esteem) because of your HIV status	488 (80.4)	119 (19.6)	745 (75.0)	248 (25.0)	1233 (77.1)	367 (22.9)
Felt you should be punished for your HIV status	491 (80.2)	121 (19.8)	663 (66.8)	330 (33.2)	1154 (71.9)	451 (28.1)
Felt suicidal because of your HIV status	540 (88.4)	71 (11.6)	842 (84.6)	153 (15.4)	1382 (86.1)	224 (13.9)

Changes in social interactions and life-goals

As seen in Table 18, self-exclusion from social gatherings and family/friends were reported by about 30% of the participants, with relatively more women reporting it than men. No significant difference was found between those who had disclosed their HIV status to others and those who did not, in relation to self-exclusion. Also, nearly half (46%) reported that they had decided not wanting to have sex and about 30% reported not wanting to have children, with relatively more women than men endorsing these items (Table 18). Comparison of scores on both these scales (self-withdrawal and changes in life goals) showed that women had significantly higher scores than men.

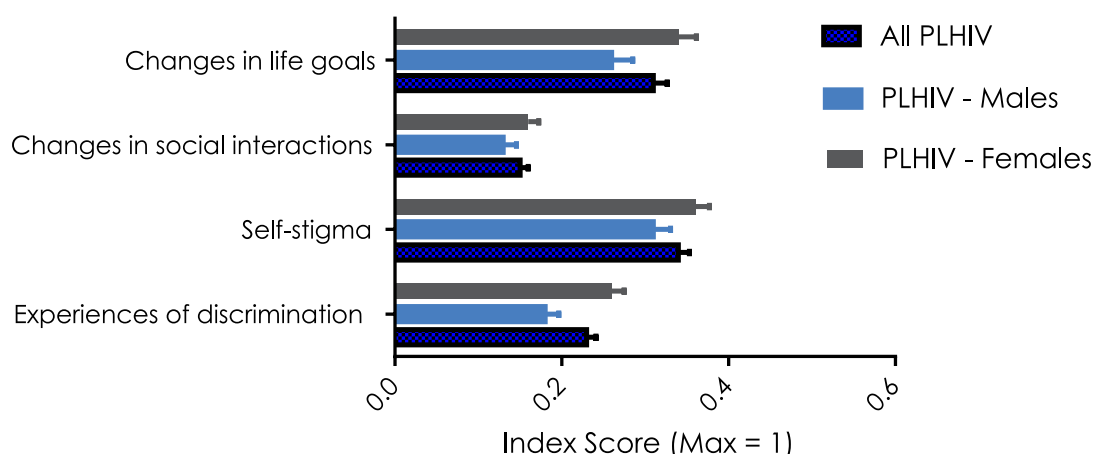


**Table 18. Changes in social interactions and life goals among PLHIV:
Scores and Item frequencies**

Changes in social interactions (Self-withdrawal and professional life goals)						
Scores	Males (N=620)		Females (N=1010)		Total (N=1630)	
	Mean (SD)		Mean (SD)		Mean (SD)	
Total raw score (Range: 0-5) (t-test: p<.05)	.69 (1.02)		.82 (1.02)		.77 (1.02)	
Index score	.13 (.20)		.16 (.20)		.15 (.20)	
Items	No	Yes	No	Yes	No	Yes
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Chosen not to attend social gathering(s)	430 (71.7)	170 (28.3)	631 (66.3)	321 (33.7)	1061 (68.4)	491 (31.6)
Isolated myself from my family and/or friends	461 (75.3)	151 (24.7)	642 (65.8)	333 (34.2)	1103 (69.5)	484 (30.5)
Took the decision to stop working	526 (90.8)	53 (9.2)	748 (93.6)	51 (5.0)	1274 (92.5)	104 (7.5)
Decided not to apply for a job/work or for a promotion	404 (93.7)	27 (6.3)	571 (93.6)	39 (6.4)	975 (93.7)	66 (6.3)
Withdrew from education/training or did not take up an opportunity for education/training	308 (93.3)	22 (6.7)	484 (87.8)	67 (12.2)	792 (89.9)	89 (10.1)
Changes in personal life goals						
	Mean (SD)		Mean (SD)		Mean (SD)	
Total raw score (Range: 0-3) (t-test: p<.01)	.79 (.97)		1.03 (1.06)		.93 (1.03)	
Index score	.26 (.32)		.34 (.35)		.31 (.34)	
Items	No	Yes	No	Yes	No	Yes
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Decided not to get married*	397 (64.0)	223 (36.0)	555 (55.0)	455 (45.0)	952 (58.4)	678 (41.6)
Decided not to have sex	167 (57.4)	124 (42.6)	299 (51.3)	284 (48.7)	466 (53.3)	408 (46.7)
Decided not to have children	392 (73.5)	141 (26.5)	495 (62.5)	297 (37.5)	887 (66.9)	438 (33.1)
*Reported by currently unmarried persons or problems with marriage of their family members						



Figure 5. Summary of mean index scores of stigma experiences of PLHIV



Suggestions from PLHIV for addressing HIV-related stigma

In order to understand the kind of supports that are required by PLHIV, the respondents were asked to prioritize the most important activity that PLHIV networks should undertake for addressing HIV-related stigma. Top priority was given to 'advocacy of the rights of PLHIV' (38%), followed by 'raising the awareness and knowledge of the public' (27%). Only 4% expressed their support for advocating for the rights of marginalized populations such as MSM, TG people, IDUs and sex workers, even though these groups have a relatively higher proportion of PLHIV when compared with 'general PLHIV'. No significant differences were found between the responses of men and women.

Table 19. Suggestions from PLHIV for addressing HIV-related stigma

Suggested advocacy actions	Males (N=620)	Females (N=1010)	All PLHIV (N=1630)
	n (%)	n (%)	n (%)
Advocating for the rights of all PLHIV	220 (35.7)	395 (39.3)	615 (37.9)
Raising the awareness and knowledge of the public about HIV/AIDS	178 (28.7)	264 (26.2)	442 (27.2)
Providing support to PLHIV by providing emotional, physical and referral support	111 (18.0)	222 (22.0)	333 (20.5)
Educating PLHIV about living with HIV/AIDS (including treatment literacy)	75 (12.2)	101 (10.0)	176 (10.8)
Advocating for the rights or and providing support to particularly marginalized groups (MSM, IDU, sex worker)	33 (5.3)	24 (2.4)	57 (3.5)



Factors associated with self-stigma and changes in social interactions and life goals

Factors that were significantly associated with self-stigma among both men and women include: lower education (<high school), and higher discrimination experience. Among women, being in younger age group (< 35 years) was also a significant predictor of self-stigma.

In relation to changes in social interactions, having higher scores in discrimination experiences and higher scores in self-stigma were significant predictors. For changes in life goals, internalised stigma was not a significant predictor. However, higher scores in discrimination experiences and higher score in changes in social interactions as well as age, education and marital status emerged as significant predictors of changes made by PLHIV in their life goals. In other words, discrimination experiences of PLHIV seem to affect the way they interact with others or make them to change their life goals, mostly in terms of restraining their ambitions.

Table 20. Multivariate linear regression results predicting self-stigma, and changes in social interactions and life goals for PLHIV (N=1630)												
Variables / Scales	Self-stigma						Changes in social interactions			Changes in personal life goals		
	Males (N=620)			Females (N=1010)								
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Age (<35=0 ,>36)	-.045	.018	-.070*	-.023	.020	-.044	.004	.009	.010	.048	.014	.066**
Gender (Female=0, Male=1)							.016	.010	.038	-.017	.014	-.024
Education (<High school=0, >High school=1)	-.056	.017	-.093**	-.041	.020	-.078*	-.026	.009	-.061**	-.057	.014	-.081***
Marital status (Unmarried=0, Married=1)	.019	.017	.032	-.003	.021	-.005	-.039	.009	-.095***	-.118	.014	-.171***
Discrimination or Enacted stigma (Index score)	.567	.034	.475***	.395	.046	.332***	.231	.021	.266***	.212	.032	.145***
Self-stigma (Index score)							.230	.018	.312***	-.020	.027	-.016
Changes in social interactions (Index score)										.861	.037	.512***
Adjusted R2	.23			.11			.26			.42		



Health Care Workers (HCWs)

Socio-demographic characteristics

Two-fifth of the HCW respondents were nurses, one-fifth were doctors, and the remaining were lab technicians, pharmacists and medical accountants. For the purposes of analysis, doctors and nurses were grouped as 'clinical staff' and the rest as 'non-clinical staff'. The sample had a slightly higher proportion of women than men (54% vs. 46%). A little more than half of the sample was below 35 years of age. More than half (55%) of the respondents had studied up to graduate level. Overall, the mean number of years of working experience was 9.5 years (SD=8.7), with no significant difference between clinical and non-clinical staff.

Table 21. Socio-demographic characteristics of HCWs

Demographic characteristics	Males N=269 (46%)	Females N=315 (54%)	Total N=584
	n (%)	n (%)	n (%)
Age (years)			P=.13
18 to 35	130 (48.5)	173 (54.9)	303 (52.0)
36 to 56	138 (51.5)	142 (45.1)	280 (48.0)
Education			P=.73
Graduate	150 (56.2)	172 (54.8)	322 (55.4)
Non-graduate	117 (43.8)	142 (45.2)	259 (44.6)
Occupation category			P<.001
Clinical staff			
(Doctors and Nurses)	100 (37.3)	241 (77.0)	341 (58.7)
Non-clinical staff			
(pharmacists, lab technicians, etc.)	168 (62.7)	72 (23.0)	240 (41.3)

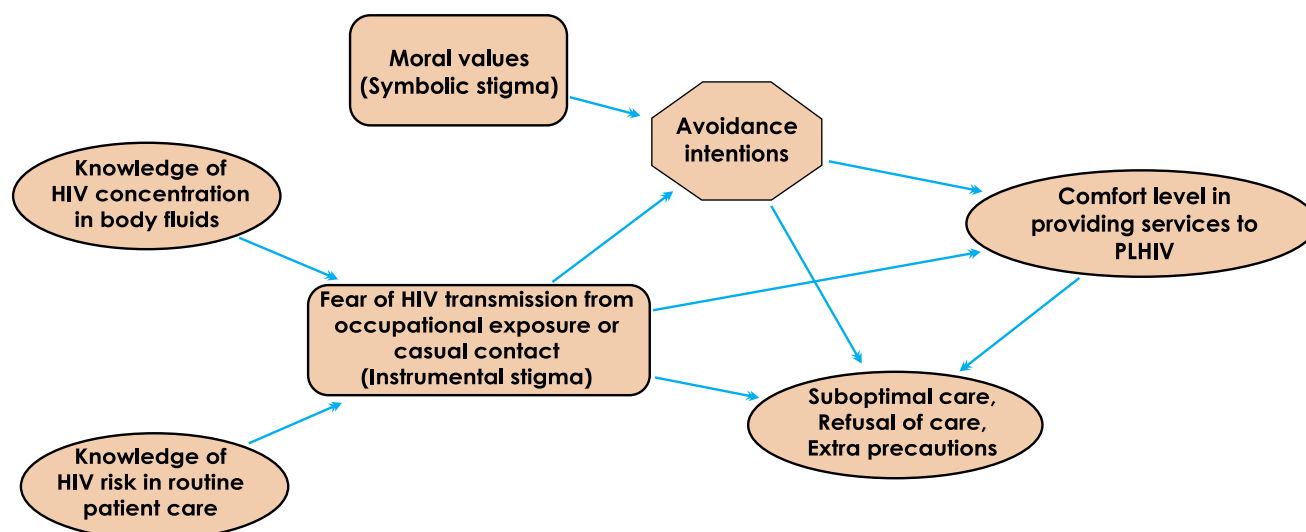
Analytic framework used: Interrelations between Instrumental and Symbolic stigma and Comfort level in providing services

The questionnaire captured information from HCWs on their knowledge of concentration of HIV in body fluids (e.g., blood, saliva) and risk of HIV transmission from these fluids as well as knowledge of HIV transmission risk in routine patient care (e.g., giving injections). The accuracy of knowledge levels in these two aspects may be related to fear of occupation-related HIV transmission risk, which in turn may have links with avoidance intentions, comfort level in providing services to PLHIV



and potential discriminatory actions (such as suboptimal care) or extra precautions. Similarly, moral values among HCWs were also assessed in addition to instrumental stigma, as symbolic stigma may also play a role in willingness to provide services to PLHIV and engaging in discriminatory actions. This framework is summarized in Figure 6. The findings are summarized in this section based on this framework.

Figure 6. Instrumental and symbolic stigma among HCWs and connections with comfort level in providing services



Knowledge about risk of HIV transmission from body fluids

Nearly all (97%) participants had adequate knowledge that blood contains high enough concentration of HIV that can result in transmission. However, a significant proportion did not know that vaginal fluid (21%) and breast milk (53%) have relatively high concentration of HIV. In general, clinical staff had a better knowledge than non-clinical staff (not statistically significant as seen from the section on the index scores on HIV transmission misconceptions). While nearly all agreed that sweat, tears and urine are not infectious, about one-fourth wrongly reported that saliva contains high concentration of HIV, with a significantly higher proportion of clinical staff having this misconception than non-clinical staff (26% vs. 18%)^f.

f. This belief among clinical staff might then have connections with avoiding contact with PLHIV (or might be used to justify not serving PLHIV).

Table 22. Adequacy of knowledge about concentration of HIV in body fluids and risk of HIV transmission						
Fluids	Clinical staff		Non-clinical staff		All HCWs	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
	Adequate knowledge	Inadequate knowledge	Adequate knowledge	Inadequate knowledge	Adequate knowledge	Inadequate knowledge
High concentration fluids (risk of transmission present)						
Semen	302 (92.1)	26 (7.9)	205 (89.5)	24 (10.5)	507 (91.0)	50 (9.0)
Blood	330 (97.3)	9 (2.7)	235 (97.5)	6 (2.5)	565 (97.4)	15 (2.6)
Vaginal fluid	262 (80.1)	65 (19.9)	170 (76.6)	52 (23.4)	432 (78.7)	117 (21.3)
Breast milk	152 (48.7)	160 (51.3)	92 (42.4)	125 (57.6)	244 (46.1)	285 (53.9)
Low concentration fluids (less or virtually no risk of HIV transmission)						
Saliva	228 (73.8)	81 (26.2)	172 (81.1)	40 (18.9)	400 (76.8)	121 (23.2)
Sweat	311 (97.8)	7 (2.2)	220 (97.3)	6 (2.7)	531 (97.6)	13 (2.4)
Tears	311 (98.1)	6 (1.9)	216 (95.6)	10 (4.4)	527 (97.1)	16 (2.9)
Urine	285 (95.0)	15 (5.0)	210 (95.0)	11 (5.0)	495 (95.0)	26 (5.0)

Knowledge of risk of HIV transmission from routine patient care

About two-thirds reported that there is a risk of HIV transmission from needle prick injuries, and about one-fifth (23%) reported there is risk in handling soiled linens. Only 5% incorrectly reported that there is risk of HIV from touching the skin of a person with HIV. Despite this, about three-fourths of both clinical and non-clinical staff endorsed the use of wearing gloves for performing any task related to taking care of a patient who might be having HIV.

Table 23. Knowledge of risk of HIV transmission in routine patient care and belief about extra precaution			
Items	Clinical staff [N=341] n (%)	Non-clinical staff [N=243] n (%)	Total [N=584] n (%)
Risk of getting HIV from:			
Handling soiled linens (Yes)	89 (26.1)	49 (20.2)	138 (23.6)
Needle prick (Yes)	250 (73.3)	153 (63.2)	403 (69.1)
Touching the skin of PLHIV (Yes)	18 (5.3)	8 (3.3)	26 (4.5)
Extra Precaution			
Wearing latex gloves for any task in taking care of a patient who might be HIV positive (Yes)	261 (76.5)	189 (77.8)	450 (77.1)



Index scores of HIV Transmission Misconceptions

To compare HIV transmission misconceptions of HCWs with GP and KPs, an index score was created with three items (perceived risk of exposure to saliva and sweat, and handling solid linens), which are similar to the items in the HIV transmission misconceptions scale used among GP and KPs. The results of raw and index scores are summarised in Table 24. There was no significant difference between the scores of clinical staff and non-clinical staff.

Table 24. HIV Transmission Misconceptions among HCWs: Raw and Index Scores			
Scores	Clinical staff [N=341]	Non-clinical staff [N=243]	All HCWs [N = 584]
	Mean (SD)	Mean (SD)	Mean (SD)
Mean raw score (0-3) (t-test: p=ns)	.64 (.76)	.60 (.82)	.63 (.78)
Mean index score	.20 (.25)	.20 (.27)	.20 (.26)

Instrumental Stigma and Avoidance Intentions

The fear of infection from body fluid contacts with PLHIV was quite significant among HCWs. As seen in Table 25, in general, HCWs were afraid of getting HIV from potentially exposure-prone procedures when compared with non-invasive procedures. For example, about half of the clinical staff were afraid of HIV transmission during invasive procedures such as surgery/suturing and more than one-third were afraid of putting in an intravenous drip. However, about one-fifth were afraid of fear of transmission from touching saliva. These beliefs might be the basis for endorsing the need for wearing latex gloves for all procedures with PLHIV or persons suspected to have HIV (noted earlier).

Despite the apparently high levels of correct knowledge of lower risk of HIV transmission and lower levels of fear of HIV transmission by touching sweat or saliva, about one-third of HCWs wanted to avoid touching the clothes or other belongings of PLHIV or patients suspected of HIV, showing high levels of avoidance intention.

Table 25. Fear of HIV transmission in invasive and non-invasive procedures, and avoidance intention (HCWs)			
Items	Clinical staff [N=341]	Non-clinical staff [N=243]	All HCWs [N = 584]
	n (%)	n (%)	n (%)
Fear of HIV transmission while providing services to PLHIV			
In potentially exposure-prone procedures			
Conducting surgery or suturing	190 (55.7)		289 (49.4)
Dressing the wounds	160 (46.9)	99 (40.7)	259 (44.3)
Giving an injection	125 (36.7)	80 (32.9)	205 (35.1)
Putting in an intravenous drip	136 (39.9)	70 (28.9)	206 (35.2)
In non-invasive procedures			



Touching the sweat	27 (8.0)	11 (4.5)	38 (6.5)
Touching the saliva	82 (24.2)	34 (14.1)	116 (19.8)
Taking blood pressure	35 (10.2)	39 (16.0)	74 (12.6)
Avoidance intention			
Avoid touching clothing and belongings of patients known or suspected to have HIV	126 (37.0)	72 (29.8)	198 (34.0)

Fear of contracting HIV through work-related exposure

About half (49%) of the respondents agreed that the most frequent mode of contracting HIV among health care workers was through work-related exposure^g. There were no significant differences between clinical and non-clinical staff or between men and women.

Source of knowledge of HIV status of patients and colleagues

One-fourth (21%) of the HCWs reported that they knew the HIV-status of their patients even though they did not have any HIV-related signs/symptoms and 14% reported being aware of HIV-positive co-workers in their health facility. A little more than two-fifths of the HCWs reported that they came to know of HIV-positive status of both patients and colleagues/coworkers through hospital files, and about one-fourth reported that they came to know through the patients or colleagues themselves. These findings possibly indicate the lack of confidentiality in keeping the HIV status of patients from HCWs who are not directly involved in their clinical care, and lack of mechanisms to keep the HIV status of HCWs in a confidential manner.

Table 26. Source of knowledge of HIV status of patients and colleagues

Source of knowledge	Source of knowledge of HIV- positive patient [N=119]		Source of knowledge of HIV- positive colleague [N=78]	
	Clinical staff	Non-clinical staff	Clinical staff	Non-clinical staff
	n (%)	n (%)	n (%)	n (%)
Hospital files	39 (47.6)	18 (48.6)	22 (40.0)	10 (43.5)
Disclosure by the patient or colleague	30 (36.6)	10 (27.0)	20 (36.4)	7 (30.4)
Family member	4 (4.9)	6 (16.2)	1 (1.8)	2 (8.7)
Workplace colleague	10 (12.2)	6 (16.2)	5 (9.1)	3 (13.0)
Gossip / Rumors	6 (7.3)	5 (13.50)	4 (7.3)	1 (4.3)

g. This perception may be associated with avoidance of exposure to body fluids or even casual contact with PLHIV.



Symbolic stigma

In general, when compared with general population, HCWs had relatively lower levels of symbolic stigma scores^h. For example, about two-fifths (39%) believed that 'HIV is a punishment for bad behaviour' and 42% agreed that 'PLHIV are promiscuous'. Similarly, there were high levels of shame associated with the possibility of self (44%) or a family member (37%) being HIV-positive. The mean index scores on symbolic stigma measures for clinical and non-clinical staff were not significantly different ($p=.44$).

Table 27. Symbolic stigma scores among Healthcare Workers

Scores	Clinical staff [N=341]		Non-clinical staff [N=243]		All HCWs [N = 584]	
	Mean (SD)		Mean (SD)		Mean (SD)	
Mean raw score (Range; 0-7) (t-test: $p=.44$)	2.86 (2.04)		2.99 (2.05)		2.91 (2.04)	
Mean index score	.40 (.29)		.42 (.29)		.41 (.29)	
Items	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
	Disagree	Agree	Disagree	Agree	Disagree	Agree
Judgement and Blame						
HIV is a punishment from God	324 (95.3)	16 (4.7)	232 (95.9)	10 (4.1)	556 (95.5)	26 (4.5)
HIV is punishment for bad behaviour	212 (62.4)	128 (37.6)	146 (60.1)	97 (39.9)	358 (61.4)	225 (38.6)
People with HIV are promiscuous	196 (57.8)	143 (42.2)	137 (56.6)	105 (43.4)	333 (57.3)	248 (42.7)
Promiscuous men spread HIV in our community	133 (39.6)	203 (60.4)	106 (43.6)	137 (56.4)	239 (41.3)	340 (58.7)
It is the female sex workers who spread HIV	120 (35.3)	220 (64.5)	70 (29.0)	171 (71.0)	190 (32.7)	391 (67.3)
Shame						
I would feel ashamed if I was infected with HIV	195 (57.4)	145 (42.6)	132 (54.8)	109 (45.2)	327 (56.3)	254 (43.7)
I would feel ashamed if someone in my family was infected with HIV	221 (65.0)	119 (35.0)	144 (59.8)	97(40.2)	365 (62.8)	216 (37.2)

^h. Mean index scores of symbolic stigma for GP and PLHIV were .55 and .41, respectively; t-test p value=<.0001



Comfort level of HCWs in providing services to or working with PLHIV

Comfort level in treating PLHIV

A significant majority (89%) of HCWs reported that they will be comfortable in providing services to PLHIV. Similarly, more than three-fourths (80%) of the clinical staff reported that they will be comfortable performing surgical or invasive procedures on patients with unknown HIV status. However, one-third reported not wanting to touch the belongings of patients known or suspected to have HIV.

Comfort level in working with HIV-positive colleagues

In response to the query on whether they will be comfortable working with an HIV-positive colleague, 84% agreed that they will be comfortable in assisting or being assisted by them and over three-fourth (77%) said they will be comfortable in sharing a bathroom with them.

Table 28. Comfort levels of HCWs in providing services to PLHIV and working with HIV-positive colleagues						
Items	Clinical staff [N=341]		Non-clinical staff [N=243]		All HCWs [N = 584]	
	Agree*	Disagree**	Agree	Disagree	Agree	Disagree
Comfort level in providing services to PLHIV						
Comfortable providing health services to clients who are HIV-infected	302 (88.6)	39 (11.4)	217 (90.0)	24 (10.0)	519 (88.9)	63 (10.8)
Comfortable performing surgical or invasive procedures on clients whose HIV status is unknown	273 (80.1)	68 (19.9)				
Comfort level in working with HIV-positive colleague						
Comfortable assisting or being assisted by a colleague who is HIV infected	285 (86.6)	44 (13.4)	196 (82.4)	42 (17.6)	481 (84.8)	86 (15.2)
Comfortable sharing a bathroom with a colleague who is HIV-infected	2 6 9 (78.9)	72 (21.1)	1 7 9 (73.7)	64 (26.3)	4 4 8 (76.7)	136 (23.3)
*includes agree and strongly agree; **includes disagree and strongly disagree						

Witnessing discrimination against PLHIV in health care settings

To understand the types of discrimination faced by PLHIV in health care settings, responses were sought from HCWs on various possible situations in which PLHIV might have faced stigma and discrimination. To avoid the possibility of socially desirable responses, HCWs were asked if they had observed various forms of discrimination against PLHIV in their institutions in the previous year.



In general, a majority reported having witnessed one or more forms of discrimination against patients who were either suspected to be or were HIV-positive.

Suboptimal care and refusal of care

About one-third of both clinical and non-clinical staff reported that they had personally witnessed PLHIV receiving less care and attention than other patients. Similarly, they had seen senior health care providers avoid treating PLHIV themselves by assigning the client to a junior provider instead (which can be considered as an indirect form of refusal of care of PLHIV).

Extra precautions

A large majority had observed extra precaution being taken by HCW with patients known or suspected to be HIV-positive. About three-fourth or more of the respondents reported that they had seen HCWs taking more care than required in sterilizing instruments, referring some clients to be tested for HIV before scheduling surgery, and using latex gloves for performing non-invasive exams on clients known or suspected to be infected with HIV.

HIV testing: consent and confidentiality

About one-third of HCWs reported that they had seen patients in their facilities being tested for HIV without informed consent. Similarly, about one-fourth (28%) of HCWs reported that patient's confidentiality was breached in their health facility as they had observed HCW gossiping about the client's HIV status to other providers not directly involved in the care of those patients.

Table 29. Observation of discriminatory practices against PLHIV or patients suspected of having HIV in one's health care facility (in the past year)

Observed practices with clients were known or suspected to be HIV-infected	Clinical staff [N=341]	Non-clinical staff [N=243]	All HCWs [N = 584]
Suboptimal care and indirect refusal of care			
Receiving less care/attention than other patients	98 (29.0)	80 (33.2)	178 (30.7)
Because a patient is HIV-positive, a senior health care provider assigned the client to a junior provider	97 (28.4)	81 (33.5)	178 (30.5)
Extra precautions for PLHIV or patients suspected to have HIV			
Extra precautions being taken in the sterilization of instruments used on HIV-positive patients	286 (84.4)	184 (76.7)	470 (81.2)
Requiring some clients to be tested for HIV before scheduling surgery	281 (82.4)	183 (75.6)	464 (79.6)
Using latex gloves for performing noninvasive exams on clients suspected of having HIV	262 (76.8)	171 (70.7)	433 (74.3)



HIV testing: consent and confidentiality

Testing a client for HIV without his/her consent	106 (31.1)	80 (33.1)	186 (31.9)
Health care providers gossiping about a client's HIV status	97 (28.6)	69 (28.6)	166 (28.6)

Comparison of characteristics of HCWs who reported comfortable and not comfortable in providing services to PLHIV

Bivariate analyses showed that, when compared with HCWs who were not comfortable in providing services to PLHIV, significantly higher proportion of HCWs who were comfortable, belonged to younger age group (53.7% vs. 38.1%); did not have fear of occupational risk of HIV (67.4% vs. 54%); and reported that latex gloves were required for any care-giving task related to patient who might be HIV-positive (79% vs. 62%). In addition, HCWs who were comfortable in providing services had significantly lower scores on symbolic stigma when compared with those who were not comfortable ($p < .001$).

Table 30. Characteristics of HCWs who were comfortable and not comfortable in providing services to PLHIV

Variables	'Comfortable in providing services to PLHIV'		P value (Chi square)
	Yes	No	
Age groups			
<35	278 (53.7)	24 (38.1)	<.05
>36	240 (46.3)	39 (61.9)	
Sex			
Males	242 (46.6)	25 (39.7)	
Females	277 (53.4)	38 (60.3)	>.05
Occupation			
Non-clinical staff	217 (41.8)	24 (38.1)	
Clinical staff	302 (58.2)	39 (61.9)	>.05
Fear of occupational risk of HIV infection			
No	349 (67.4)	34 (54.0)	
Yes	169 (32.6)	29 (46.0)	<.05
Latex gloves for any task related to taking care of a patient who might be HIV-positive	109 (21.0)	24 (38.1)	<.01
No	410 (79.0)	39 (61.9)	
Yes			
Symbolic stigma (Index score)	Mean (SD)	Mean (SD)	P value (t-test)
	.40 (SD .29)	.55 (SD .27)	<.001



Factors associated with HCWs who reported 'not comfortable in providing services to PLHIV'

Logistic regression analysis showed that factors significantly associated with 'not comfortable in providing services to PLHIV' were: being in the age group of >35 years, and having higher scores of symbolic stigma. Gender, type of occupation (clinical or non-clinical) and fear of occupational risk of HIV transmission were not found to be statistically significant (Table 31). However, those who reported the need for using latex gloves for any care-giving task of a patient who might be HIV-positive were less likely to be uncomfortable in providing services to PLHIV.

Table 31. Multivariate logistic regression predicting HCWs who reported 'not comfortable in providing services to PLHIV'			
Variables	B	SE	Adjusted Odds Ratio (with p value)
Age group (<35=0, >36=1)	.71	.28	2.04*
Occupation (non-clinical staff=0, clinical staff=1)	.12	.31	1.13 (ns)
Sex (Female=0, Male=1)	-.27	.31	.75 (ns)
Fear of occupational-risk of HIV infection (No=0; Yes=1)	-.25	.28	.77 (ns)
Latex gloves for any task related to taking care of a patient who might be HIV-positive (No=0, Yes=1)	-.85	.29	.42**
Symbolic stigma (Mean Index score)	.24	.07	1.28**
*p<.05, **p<.001. ns = not significant			



Box 3. Relations between Stigma and level of HIV prevalence in a state

To explore possible differences between GP in high HIV prevalence and low/medium HIV prevalence states in relation to the levels of endorsement of discrimination against PLHIV, symbolic stigma and HIV transmission misconceptions, mean index scores on each of the three scales were subjected to t-test for statistical comparison. Similar analyses were conducted for HCWs and PLHIV.

General Population: HIV transmission misconceptions, Symbolic stigma and Discrimination against PLHIV by levels of HIV prevalence

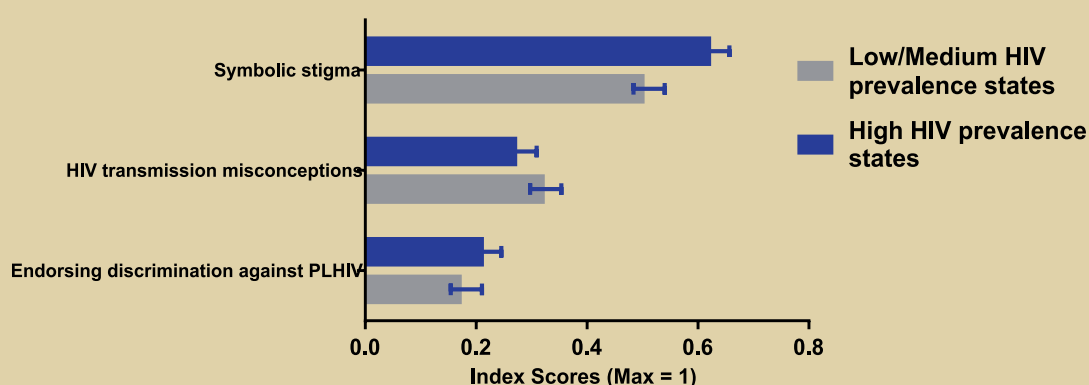
T-test results showed that GP in high HIV prevalence states had significantly higher levels of stigmatising attitudes (symbolic stigma) and significantly higher levels of endorsement of discrimination against PLHIV compared to those in low/medium prevalence states. However, GP in low/medium HIV prevalence states had significantly higher levels of HIV transmission misconceptions when compared with those in high HIV prevalence states.

These results suggest that while information and education campaigns of the government are able to improve knowledge about HIV transmission among GP in high prevalence states, the corresponding change in their attitudes and values is lacking. This is possibly due to the absence of strategies to engage general population in discussing issues around HIV vulnerability and marginalisation, for example how poverty and stigmatised gender identity make people more vulnerable to HIV. In the absence of such engagement the construction of the epidemic is along traditional lines where social groups historically stigmatised due to their sexual identity and behaviour are judged as immoral and irresponsible and blamed for contracting and spreading HIV.

The significantly higher levels of HIV transmission misconceptions in low/medium HIV prevalence states point to the lack of complete and accurate information about HIV among GP in these states possibly due to poor HIV awareness initiatives and fewer or ineffective IEC campaigns. The low HIV rates are possibly the reason for their complacency in imparting awareness about HIV. These findings underscore the need for paying serious attention to removing HIV transmission misconceptions and providing complete and correct HIV/AIDS knowledge in low/medium HIV prevalence states. In high HIV prevalence states, on the other hand, the attention needs to be on developing strategies to influence the stigmatising attitudes and discriminatory intentions of GP towards PLHIV and marginalised groups. This could be done through dialogues and discourses in popular media as well as in informal settings such as, communities and more formal settings such as work and schools/colleges.



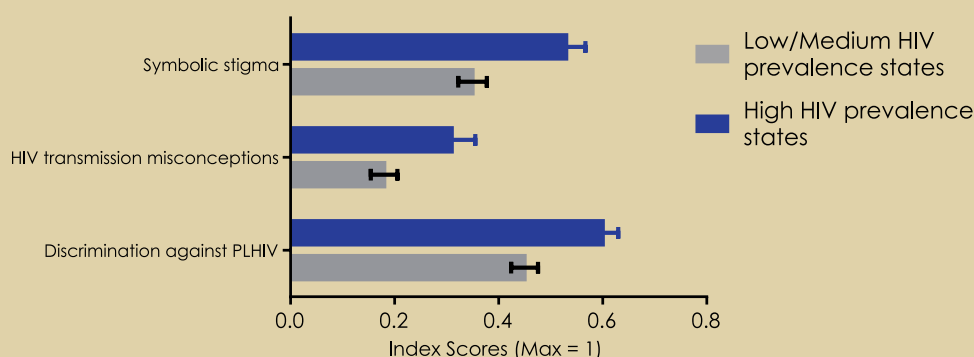
Figure 7. General Population: Comparison of index scores of GP in high HIV prevalence and medium/low HIV prevalence states



Health Care Workers: HIV transmission misconceptions, Symbolic stigma and Discrimination against PLHIV by levels of HIV prevalence

T-test results showed statistically significant differences for all the three constructs, with HCWs in high HIV prevalence states having higher scores on all the three constructs (Note: The higher the scores, the higher the levels of symbolic stigma, HIV transmission misconceptions and discrimination). This finding suggests that, in high HIV prevalence states, efforts to reduce the stigmatising attitudes of HCWs towards PLHIV and marginalised groups need to be intensified.

Figure 8. Health Care Workers: Comparison of Index scores of high HIV prevalence and medium/low HIV prevalence states



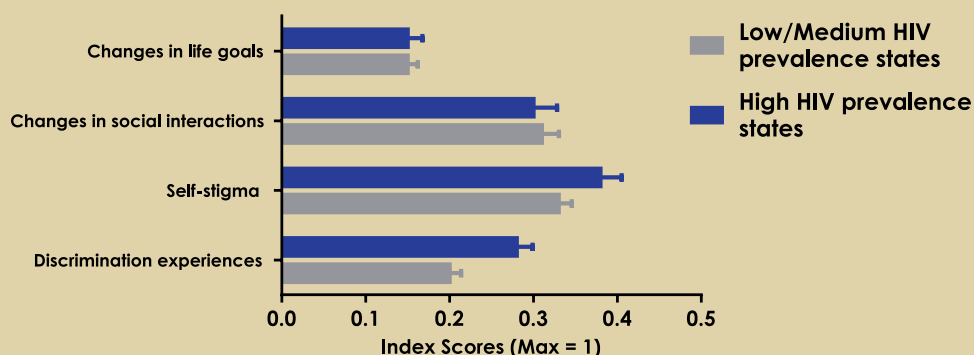
Although one would expect GP and HCWs in high HIV prevalence states to be more sensitive to the issues faced by PLHIV because of a greater exposure to news about them, these findings seem to suggest that apparently high visibility of HIV disease in the society makes GP/HCWs more judgemental and develop negative attitudes towards PLHIV and marginalised groups. The higher presence of HIV perhaps reinforces their perception of marginalised groups as irresponsible. They may also be perceived as potential source of risk to self and/or loved ones. The latter explanation may actually hold good for HCWs in particular, as they are more likely to be seeing (directly or indirectly) PLHIV and marginalised groups due to the very nature of their work. This, however, runs contrary to the 'contact hypothesis', which states that getting to know or see persons with HIV or persons with any other stigmatised nature/condition promotes better understanding of those persons. A possible reason for this apparent discrepancy could be the professional and impersonal ('objective') nature of the interactions between

PLHIV and other marginalised groups with HCWs. In heavy workload settings of Indian clinics, provider-patient interactions might have failed to promote a humane understanding among HCWs about the issues of PLHIV and marginalized groups. More research is needed to verify contact hypothesis within the Indian cultural context.

PLHIV: Discrimination experiences and self-stigma among PLHIV by levels of HIV prevalence

In general, PLHIV in both high and low/medium prevalence states reported higher levels of self-stigma than discriminatory experiences at the hands of others (as indicated by the higher index scores on self-stigma scale than the discrimination experiences scale). To explore possible differences between PLHIV in high HIV prevalence and low/medium HIV prevalence states in relation to discrimination experiences, self-stigma, changes in social interactions and changes in personal goals, mean index scores on each of the three scales were subjected to t-test for statistical comparison. The statistical comparisons found that PLHIV in high HIV prevalence states had significantly higher index scores on discrimination experiences and self-stigma than those PLHIV in low/medium HIV prevalence states. It corroborates with the previously stated finding that GP and HCWs in the high HIV prevalence states had significantly higher index scores on symbolic stigma and endorsement of discriminatory actions (or witnessing discrimination in health care settings) than their counterparts in low/medium HIV prevalence states. These are the very sources of stigma for PLHIV.

Figure 9. People living with HIV: Comparison of index scores



CONCLUSIONS

Persistence of HIV-related stigma among general public and health care workers

Findings of this study demonstrate that HIV-related stigma continues to persist in India even after three decades of HIV epidemic in the country and despite efforts to reduce it. HIV transmission-related misconceptions and fear of HIV risk from casual contact, as well as symbolic stigma (value judgments, blame and shame) were found to be associated with endorsement of discriminatory actions against PLHIV (which can be understood as indirect intentions to discriminate against PLHIV). These have serious implications in the context of health care delivery as well as care and support for PLHIV within their own families or communities.

Extent of HIV transmission misconceptions and fear-based stigma (stigma based on fear of getting HIV)

Fear of HIV transmission from non-blood body fluids (such as saliva and sweat) that have very low or almost no risk of HIV transmission was found despite the ongoing mass media messages on the correct modes of transmission of HIV. The study underscores the urgency of articulating and debunking such transmission-related misconceptions in HIV awareness campaigns. Avoidance of casual contact with actual or suspected PLHIV was reported across the populations (GP, KPs and HCWs). It is not clear, however, whether avoidance of PLHIV is because of overestimated risk of getting HIV (or other infections) from casual contact or because of the moral element associated with someone who is PLHIV. i.e., judging a person as immoral and thus as 'untouchable'. HIV transmission misconceptions, in general, were relatively less when compared with symbolic stigma or value-driven stigma (as seen from the comparison of index scores across the populations), highlighting the need to focus more on symbolic stigma reduction. That is, to focus on how to reduce the negative attitudes towards marginalised groups (such as sex workers, MSM, TG people and IDUs) and not to blame and shame PLHIV for their HIV-status. Only FSWs, in particular, had higher index scores on HIV transmission misconceptions than symbolic stigma, when compared with all other groups including GP respondents. Thus, among FSWs, the focus could be more on removing HIV transmission misconceptions than reducing stigma related to moral or judgemental values.

Symbolic stigma (value-driven stigma of shame and blame) against PLHIV persists among general public, HCWs and key populations

Symbolic stigma (value-driven stigma) index scores were highest among GPs, followed by HCWs and KPs, and had strong associations with endorsement of discriminatory actions against PLHIV. This further confirms the need to focus on addressing prejudices based on gender, sexuality and morality in society as well as among HCWs, as HIV-related stigma intersects with other prejudices. For example, women living with HIV face higher levels of discrimination than men and widowed women facing highest level of discrimination among women of different marital status. Similarly, the finding that a significant proportion of GPs and HCWs believe that FSWs and other KPs are responsible for the spread of HIV shows that prejudices related to women in sex work and other marginalised populations may further aggravate stigma faced by PLHIV.



This indicates the need to explicitly focus on ways to reduce, if not eliminate, value judgments, shame and blame associated with PLHIV or people belonging to certain vulnerable groups. So far, no specific interventions in India seem to have focused on these aspects of stigma reduction, even though 'value clarification' sessions in some of the HIV training programs for HCWs are included in an ad hoc manner.

PLHIV continue to face discrimination within health care settings

Despite a considerable majority of HCWs reporting being comfortable in providing services to PLHIV, a significant proportion reported having witnessed discriminatory acts against PLHIV in health care settings in the past year. These indicate that PLHIV continue to face barriers in the health care settings in getting proper attention and treatment. It also supports the finding that nearly one-third of PLHIV reported having received poor quality of health services in the past year.

High levels of self-stigma among PLHIV

High levels of self-stigma among PLHIV, especially among women living with HIV, and changes reported by PLHIV in social interactions and personal goals after their HIV diagnosis show that PLHIV internalize the society's negative attitude towards PLHIV, and suffer psychologically. This points to the need for strengthening counselling and other forms of support for PLHIV in overcoming self-stigma and to avoid its negative consequences. The gender dimensions of self-stigma need to be carefully addressed in counselling sessions.

Our findings are consistent with the findings from other studies among general public (Bharat et al., 2014; Ekstrand et al., 2012, health care workers (Ekstrand et al., 2013), PLHIV (Ekstrand et al., 2013), and key populations (Chakrapani et al., 2013; Logie et al., 2012; Malave et al., 2014) that were conducted in the past six years, further strengthening the validity of the conclusions from this study. These studies too have found high levels of HIV-related stigma and discrimination against PLHIV, stigma against key populations and self-stigma among PLHIV.



RECOMMENDATIONS

Implications for stigma reduction programmes

Addressing misconceptions, stigmatising attitudes and discriminatory intentions

Focused HIV-related stigma reduction programmes need to be introduced and intensified among the general population, health care workers and key populations. Media messages need to move beyond providing mere educational messages on the correct modes of HIV transmission and promoting acceptance of PLHIV to explicitly addressing myths and misconceptions related to fear of HIV transmission. In particular, risk perception from non-blood body fluids such as saliva and sweat and from casual contact, need to be corrected given that all groups of study respondents (GPs, HCWs and KPs) seem to overestimate HIV risk from exposure to saliva and casual contact. Worries related to risk of HIV among children through play activities with HIV-positive children were especially high. These must be corrected among both parents and children with the objective of addressing baseless misconceptions among young people.

HIV misconceptions and value-driven stigma (stigma based on moral/judgemental values) among the participants were found to be associated with discriminatory intentions (endorsement of discriminatory actions against PLHIV), pointing out the interconnections between them. This underscores the need to focus on reducing or eliminating both HIV misconceptions and negative attitudes towards PLHIV and marginalised groups in order to reduce or abolish discrimination.

Addressing intersectional stigma

The study findings lend strong support to the intersectional nature of HIV-related stigma underscoring the need to link HIV stigma to prevailing and deeply entrenched structural factors. Stigma reduction programmes thus need to explicitly educate the public and HCWs about sexual and gender diversity within society, drug dependency issues and the rights of sex workers. That is, besides educating people about HIV, programmes also need to address the stigma faced by sexual minorities, drug users and sex workers, and make the public and HCWs understand the sources of vulnerability of these populations to HIV and their rights to dignity, health and other services and a stigma-free environment.

Campaigns, Trainings and Sensitisation

Stigma reduction programmes for the public can be part of mass media and mid-media campaigns and can be geographically targeted – for example, different strategies in cities with high HIV prevalence and for key populations. The programmes for the HCWs can be integrated into periodic HIV trainings (including refresher trainings) and training on universal precautions and hospital safety, in which the difference between 'universal precautions' and fear-based 'extra precautions', as found in this study, must be reinforced. For the newer generation of HCWs such trainings can be part of the medical, nursing and paramedical course curricula. Trainings for HCWs need to incorporate topics on gender, social marginalisation and



vulnerability for developing a deeper understanding among them of social drivers of the epidemic. Among KPs, stigma reduction efforts can be channelled through the HIV intervention projects so that KPs can accept PLHIV belonging to their own communities. This will also help PLHIV among these communities to disclose their status and get necessary treatment and support.

Involving PLHIV and marginalised groups in awareness and training programs

Personally knowing a person living with HIV, essentially giving a human face to the HIV epidemic, seems to be useful, as this study too found it was associated with less discrimination intention. Thus, involving PLHIV in stigma reduction campaigns targeted towards general population and in the trainings of HCWs may help GP and HCWs in better understanding the issues faced by PLHIV.

Addressing self-stigma and specific issues of women living with HIV

Given the high levels of self-stigma, especially among women living with HIV, stigma reduction interventions need to develop programs that will help PLHIV to develop their self-worth using a gender-sensitive approach. In addition to encouraging PLHIV to join support groups of PLHIV and use other available services within PLHIV networks, professional psychological counselling support and mental health referrals need to be provided. Counsellors at the health care settings and voluntary agencies (including PLHIV networks) need to screen for self-stigma and offer support in reducing self-stigma and its impact (on social interactions and change in life goals) through one-to-one counselling and educational services to help PLHIV to lead fulfilling social and professional lives.

Special attention needs to be given to address the issues faced by women living with HIV, especially widows, as they tend to be discriminated more by their families and communities, when compared to men. Counsellors may also specifically help in promoting the acceptance of PLHIV within their own families, including facilitating disclosure of HIV status and practising safer sex or safer injecting drug use until or even after disclosure.

Implications for policies

Having and enforcing explicit policies on non-discrimination and making others aware of such policies will help in deterring people from engaging in discrimination against PLHIV and other vulnerable groups. However, this strategy needs to go hand-in-hand with promoting better understanding of the rights of, and issues faced by, PLHIV and groups at-risk for HIV.

Future research

As there is a near lack of rigorously-evaluated culturally-competent stigma interventions in India, future research need to design and test evidence-based stigma reduction interventions among different populations (GP, HCWs, and KPs) and self-stigma reduction interventions among PLHIV (including those PLHIV from KPs). Existing stigma-related measures (scales) need to be refined and validated among different populations and in different settings (especially urban areas). Also, longitudinal studies that periodically measure the levels and forms of stigma among the various populations and stigma faced by PLHIV will help in monitoring the trends in stigma, and in evaluating whether stigma reduction efforts are working.



REFERENCES

- Bharat, S. (2011).** A systematic review of HIV/AIDS-related stigma and discrimination in India: current understanding and future needs. *SAHARA J*, 8(3), 138-149.
- Bharat, S., Ramakrishna, J., Heylen, E., & Ekstrand, M. L. (2014).** Gender-based attitudes, HIV misconceptions and feelings towards marginalized groups are associated with stigmatization in Mumbai, India. *J BiosocSci*, 1-16.
- Blankenship, K. M., Biradavolu, M. R., Jena, A., & George, A. (2010).** Challenging the stigmatization of female sex workers through a community-led structural intervention: Learning from a case study of a female sex worker intervention in Andhra Pradesh, India. *AIDS Care*, 22 (Suppl 2).
- Chakrapani, V., Babu, P., Ebenezer, T. (2004).** Hijras in sex work face discrimination in the Indian health-care system. *Research for Sex Work*.p12-14.
- Chakrapani, V., Newman, P. A., Shunmugam, M., McLuckie, A., & Melwin, F. (2007).** Structural violence against Kothi-identified men who have sex with men in Chennai, India: a qualitative investigation. *AIDS EducPrev*, 19(4), 346-364.
- Chakrapani, V., Samuel, M., Shunmugam, M., & Sivasubramanian, M. (2013).** Modelling the Impact of Stigma on Depression and Sexual Risk Behaviours of Men who have Sex with Men and Hijras/Transgender women in India: Implications for HIV and Sexual Health Programmes. Chennai: Madras Christian College, the Humsafar Trust & C-SHaRP, with support from ICMR.
http://www.c-sharp.in/research_policy/Download/Stigma_Study_2013.pdf
- Ekstrand, M. L., Bharat, S., Ramakrishna, J., & Heylen, E. (2012).** Blame, symbolic stigma and HIV misconceptions are associated with support for coercive measures in urban India. *AIDS Behav*, 16(3), 700-710. doi: 10.1007/s10461-011-9888-z
- Ekstrand, M. L., Ramakrishna, J., Bharat, S., & Heylen, E. (2013).** Prevalence and drivers of HIV stigma among health providers in urban India: implications for interventions. *J Int AIDS Soc*, 16(3 Suppl 2), 18717.doi: 10.7448/IAS.16.3.18717.
- Nyblade, L. & MacQuarrie, K. (2006).** Can we measure HIV/AIDS-related stigma and discrimination? Current knowledge about quantifying stigma in developing countries.USAID Policy Project.
- Logie, C. H., Newman, P. A., Chakrapani, V., & Shunmugam, M. (2012).** Adapting the minority stress model: Associations between gender non-conformity stigma, HIV-related stigma and depression among men who have sex with men in South India. *SocSci Med*, 74(8), 1261-1268. doi: DOI 10.1016/j.socscimed.2012.01.008
- Mahajan, A. P., Sayles, J. N., Patel, V. A., Remien, R. H., Sawires, S. R., Ortiz, D. J., . . . Coates, T. J. (2008).** Stigma in the HIV/AIDS epidemic: a review of the literature and recommendations for the way forward. *AIDS*, 22 Suppl 2, S67-79.



Malave, S., Ramakrishna, J., Heylen, E., Bharat, S., & Ekstrand, M. L. (2014). Differences in testing, stigma, and perceived consequences of stigmatization among heterosexual men and women living with HIV in Bengaluru, India. *AIDS Care*, 26(3), 396-403. doi: 10.1080/09540121.2013.819409

Maman, S., Abler, L., Parker, L., Lane, T., Chirowodza, A., Ntongwisangu, J., . . . Fritz, K. (2009). A comparison of HIV stigma and discrimination in five international sites: the influence of care and treatment resources in high prevalence settings. *SocSci Med*, 68(12), 2271-2278. doi: 10.1016/j.socscimed.2009.04.002

Ogden, J., & Nyblade, L. (2005). Common at Its Core: HIV-related Stigma Across Contexts. Washington, DC: International Centre for Research on Women (ICRW).

Parker, R., & Aggleton, P. (2003). HIV and AIDS-related stigma and discrimination: a conceptual framework and implications for action. *SocSci Med*, 57(1), 13-24.

Pulerwitz, J., Michaelis, A., Weiss, E., Brown, L., & Mahendra, V. (2010). Reducing HIV-related stigma: lessons learned from Horizons research and programs. *Public Health Reports*, 125(2), 272-281.

UNAIDS (2014). Zero discrimination: Join the transformation.

<http://www.unaids.org/en/resources/campaigns/20131126zerodiscrimination/>



Notes

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Notes

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