

## Original Research Article

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# Gender variations in HIV related stigma among Indian adults

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## ABSTRACT

**Background:** Human immunodeficiency virus (HIV) is a global public health problem. Social stigma and discrimination around HIV can be a strong deterrent to seeking healthcare and deny people living with HIV (PLHIV) a life of dignity. Further, gender has a role in determining utilization of available healthcare service. Although research has been conducted on gender differences in experience of stigma among PLHIV, there remains a gap with respect to cross gender study of the determinants of HIV related stigma in the context of India which has the third highest burden of HIV globally. This serves as the motivation of the current study.

**Methods:** The study uses unit level data on adult men and women from the NFHS-4 (2015-16) survey. Logistic regression has been used for analysis of data.

**Results:** Higher percentage of adult women than men nurture HIV related stigma at all India level. Multivariate analysis reveals that for both genders, stigma falls significantly with higher educational attainment but increases with higher economic class. Differences in drivers of stigma across men and women remain with respect to religion, age, employment and marital status.

**Conclusions:** Awareness raising and stigma reducing interventions designed in view of gender specific requirements are called for to curb social discrimination against PLHIV and ensure better quality of life for them.

**Keywords:** Awareness, Gender, Healthcare, HIV, Stigma

## INTRODUCTION

Human immunodeficiency virus (HIV) remains a major public health issue at a global level. There is no cure for HIV infection. However, increased access to prevention, diagnostic facilities, treatment and care presently makes HIV a manageable though chronic health condition that enables people living with HIV (PLHIV) to have higher life expectancy. If left untreated for many years, HIV infection may culminate into acquired immunodeficiency syndrome (AIDS) which is the most advanced stage of HIV. 2020 witnessed an estimated 6,80,000 deaths from HIV related causes and 1.5 million newly acquired HIV infection with an estimated PLHIV count of 37.7 million globally.<sup>1</sup> India has the third largest HIV burden in the world with 2.1 million PLHIV in 2017. 79 per cent of them were aware of their positive HIV status, of whom 71 per cent could be put on anti-retroviral treatment.<sup>2</sup> There

is substantial economic burden for PLHIV and their families, including direct costs of care seeking and indirect costs pertaining to productivity losses due to illness.<sup>3</sup>

In the context of health, social stigma may be defined as the association of negative attributes with a person or group of people with a specific disease condition and sharing certain characteristics. Worldwide, societies and communities tend to stigmatize diseases associated with poverty and other deprivations, deviation from morally approved behavior and even physical impairment. Stigma leads to fear, shame and discrimination and causes social suffering.<sup>4</sup> HIV is associated with strong social stigma which is primarily rooted in the fear of HIV. Lack of information and awareness leading to misconceptions about the path of transmission of HIV coupled with outdated beliefs is largely responsible for such negative

attitudes and value judgements about PLHIV. A study on Sub Saharan Africa reveals that PLHIV sometime go through care-seeking pathways including suboptimal use of healthcare facilities that result in low quality of life.<sup>5</sup> Studies reveal that female gender, higher education and knowing someone with HIV/AIDS are associated with lower odds of stigmatizing attitudes.<sup>6</sup> A study based on China reports that a higher percentage of rural respondents conformed to negative sentiments towards PLHIV compared to their urban counterparts. Greater knowledge of path of spread of HIV and higher education level significantly reduced HIV related stigma.<sup>7</sup>

Gender often has a role to play in the extent of utilization of healthcare services. Studies observe significantly lower healthcare utilization among men compared to women.<sup>8,9</sup> In the context of HIV, research reveals that men expressing anticipated stigma at individual level had lower odds of testing for HIV recently. However, such association was not observed for women. Also, significantly fewer men than women were found to have undergone recent HIV testing.<sup>10</sup> Studies based on Ghana, Africa, reveal that adverse impact of stigma around HIV is more severe for women than men. Contrary to HIV positive men who expected, demanded and had support from their wives post diagnosis, HIV positive women were mostly unmarried, separated or divorced owing to their health status and more likely to be insecure in terms of housing, family roles as well as employment.<sup>11,12</sup> Although there has been research on gender differences in experience of stigma among PLHIV, there is no study so far on gender variations in attitude towards HIV related stigma or their determinants among the general population in India, which could be a contributing factor to gender differentials in associated healthcare utilization. This gap serves as the motivation of this paper.

The objective of the current study was to identify the correlates of stigma among adult men and women in India.

## METHODS

The study used unit level data from NFHS-4 (2015-16) which was carried out between January 2015 and December 2016 under the stewardship of the Ministry of Health and Family Welfare, Government of India in coordination with the International Institute of Population Sciences (IIPS), Mumbai, covering 6,01,509 households, 6,99,686 women aged 15-54 years and 1,12,122 men aged 15-59 years. It provides evidence on key population trends with respect to health and nutrition indicators including attitude towards PLHIV. Specifically the study used the men (IAMR74FL.DTA) and women (IAIR74FL.DTA) data files for analysis.

Both adult men and women were asked whether they would keep it a secret if anyone in the family got HIV infection. Positive responses have been considered as evidence for conservative attitude or "stigma" towards

HIV while negative responses represent non-stigmatizing attitude. Besides descriptive statistics, logistic regression analysis has been used to identify the determinants of HIV related stigma which has been proposed as the binary dependent variable with values 0 (no stigma) and 1 (stigma). Independent variables considered are residence, religion, reservation, wealth index, age, education level, employment status, marital status and sex and age of the household head. Data was analyzed using Stata 14 software.

## RESULTS

Out of a total of 98,267 adult men who responded to the question of whether they would hide HIV infection in the family from others, 37.01 per cent conformed to keeping it a secret. In case of women, the corresponding share stands at 40.37 per cent out of a total of 91,907 adult women who responded to the question (Table 1).

**Table 1: Share of adult men and women with HIV related stigma in India.**

HIV related stigma	Men	Women
No	61,903 (62.99)*	54,803 (59.63)
Yes	36,364 (37.01)	37,104 (40.37)
Total	98,267 (100)	91,907 (100)

Source: Author's calculation from NFHS-4 (2015-16) unit level data; \*() percentage shares

Table 2 represents the distribution of adult males and females with HIV related stigma, by their socioeconomic and demographic backgrounds. For both genders, adherence to conservative attitude towards HIV is higher among rural residents, Hindus, OBC category, rich income class, the 26-40 age group, secondary and higher education level, the married and those with a male as head of the household. However, in case of men, share of stigma was higher among the currently employed whereas a higher percentage of non-working women conform to HIV related stigma. Also, stigma was marginally higher among primary educated as compared to illiterate men. Uneducated women on the other hand had more conservatism associated with HIV, compared to women with primary education. Among men, stigma was higher among scheduled castes compared to scheduled tribes whereas women conform to an opposite picture, though the difference was marginal.

Table 3 and Table 4 summarize the results of logistic regression analysis to identify possible determinants of HIV related stigma among adult men and women in India, both in univariate and multivariate frameworks. From Table 3, it can be seen that among men, rural residents and non-Hindus are less likely to harbor HIV related stigma. Likelihood of stigma increases with the OBC category but decreases with the general category. Scheduled tribe is a significant determinant of stigma only in univariate analysis. Income class emerged as a strong determinant of stigma, with middle and rich

income classes having higher likelihood of HIV related stigma. Age was a significant factor in isolation but loses significance in the presence of other confounding factors. However, age of head of household was significant throughout. Level of education had no impact on HIV stigma among adult men in univariate analysis but with other determinants in control, it emerged as significant. Likelihood of stigma reduces with primary and 'secondary and higher' level of education. Also, stigma associated with HIV is significantly lower among married men and higher among men belonging to female headed households. Working men have greater likelihood of adhering to stigma in multivariate analysis. In univariate analysis however, employment status of adult men has no significant impact on HIV related conservatism.

Table 4 reveals that likelihood of HIV related stigma among adult women falls with rural residence. Religion

has no significance in isolation. However, after adjusting for other factors, non-Hindu women appear to be more likely to nurture such stigma. Likelihood of stigma increases with OBC category but falls with general category. Both middle income and rich economic class significantly fuel HIV related stigma. Women with higher age as well as women from households with higher age of the household head are less likely to harbor stigma, in the presence of other controls. Stigma is significantly lower among women with both primary and 'secondary and higher' level of education, although primary education has no role in univariate analysis. Likelihood of nurturing stigma associated with HIV is more among women belonging to households with female heads, and married women. Employment status appears to have no role in influencing stigma among adult women either in univariate or in multivariate analysis.

**Table 2: Distribution of adult men and women with HIV related stigma by socioeconomic and demographic characteristics.**

Socioeconomic and demographic variables	Men N (%)	Women N (%)
<b>Residence</b>		
Urban	13,093 (36.01)*	14,087 (37.97)
Rural	23,271 (63.99)	23,017 (62.03)
<b>Religion</b>		
Hindu	27,334 (75.17)	26,343 (71.00)
Non-Hindu	9,030 (24.83)	10,761 (29.00)
<b>Reservation</b>		
scheduled caste	6,474 (17.80)	6,122 (16.50)
scheduled tribe	5,854 (16.10)	6,320 (17.03)
OBC	15,141 (41.64)	14,650 (39.48)
General	8,895 (24.46)	10,012 (26.98)
<b>Wealth index</b>		
Poor	10,910 (30.00)	9,657 (26.03)
Middle income	8,460 (23.26)	8,170 (22.02)
Rich	16,994 (46.73)	19,277 (51.95)
<b>Age group</b>		
15-25	13,069 (35.94)	14,726 (39.69)
26-40	14,791 (40.67)	16,189 (43.63)
41-54	8,504 (23.39)	6,189 (16.68)
<b>Education level</b>		
No education	3,745 (10.30)	6,668 (17.97)
Primary	4,173 (11.48)	4,001 (10.78)
Secondary and higher	28,446 (78.23)	26,435 (71.25)
<b>Employment status</b>		
Not working	8,969 (24.67)	28,644 (77.20)
Currently working	27,394 (75.33)	8,460 (22.80)
<b>Marital status</b>		
Single	14,055 (38.65)	11,210 (30.21)
Married	22,309 (61.35)	25,894 (69.79)
<b>Sex of head of household</b>		
Male	32,675 (89.86)	31,295 (84.34)
Female	3,689 (10.14)	5,809 (15.66)
<b>Total</b>	36,364 (37.01)	37,104 (100)

Source: Author's calculation from NFHS-4 (2015-16) unit level data; \*() percentage shares

**Table 3: Logistic regression results for identifying the determinants of stigma associated with HIV, among Adult Men in India (no stigma=0, stigma=1).**

Socioeconomic and demographic variables	Multivariate analysis			Univariate analysis		
	OR	P> z	95% CI	OR	P> z	95% CI
<b>Residence Urban Ref</b>						
Rural	0.89	0.000***	0.87-0.93	0.85	0.000***	0.82-0.87
<b>Religion Hindu Ref</b>						
Non-Hindu	0.89	0.000***	0.87-0.92	0.88	0.000***	0.85-0.91
<b>Reservation Scheduled Caste Ref</b>						
Scheduled Tribe	0.98	0.312	0.93-1.02	0.91	0.000***	0.87-0.95
OBC	1.09	0.000***	1.05-1.13	1.11	0.000***	1.07-1.15
General	0.81	0.000***	0.78-0.84	0.82	0.000***	0.79-0.85
<b>Wealth index Poor Ref</b>						
Middle income	1.25	0.000***	1.21-1.29	1.23	0.000***	1.18-1.27
Rich	1.26	0.000***	1.21-1.30	1.23	0.000***	1.19-1.27
Age	0.99	0.155	0.98-1.00	0.99	0.000***	0.97-1.01
<b>Education level No education Ref</b>						
Primary	0.94	0.033**	0.89-0.99	0.98	0.509	0.93-1.04
Secondary and higher	0.89	0.000***	0.84-0.93	0.99	0.585	0.95-1.03
<b>Employment Not working Ref</b>						
Currently working	1.04	0.029**	1.00-1.08	0.99	0.603	0.96-1.02
<b>Marital status Single Ref</b>						
Married	0.92	0.000***	0.88-0.95	0.93	0.000***	0.91-0.95
<b>Sex of household head Male Ref</b>						
Female	1.05	0.019**	1.01-1.10	1.07	0.003***	1.02-1.12
Age of household head	0.99	0.001***	0.97-1.02	0.97	0.041**	0.95-0.99

Source: Analysis of NFHS-4 (2015-16) unit level data; \*\*\*significant at 1 per cent \*\*significant at 5 per cent \*significant at 10 per cent

**Table 4: Logistic regression results for identifying the determinants of stigma associated with HIV, among Adult Women in India (no stigma=0, stigma=1).**

Socioeconomic and demographic variables	Multivariate analysis			Univariate analysis		
	OR	P> z	95% CI	OR	P> z	95% CI
<b>Residence Urban Ref</b>						
Rural	0.90	0.000***	0.88-0.93	0.83	0.000***	0.80-0.85
<b>Religion Hindu Ref</b>						
Non-Hindu	1.04	0.020**	1.00-1.07	1.01	0.359	0.98-1.04
<b>Reservation Scheduled Caste Ref</b>						
Scheduled Tribe	0.99	0.710	0.94-1.04	0.97	0.268	0.93-1.02
OBC	1.09	0.000***	1.05-1.14	1.14	0.000***	1.09-1.18
General	0.85	0.000***	0.82-0.89	0.91	0.000***	0.87-0.95
<b>Wealth index Poor Ref</b>						
Middle income	1.18	0.000***	1.13-1.22	1.17	0.000***	1.13-1.22
Rich	1.32	0.000***	1.27-1.37	1.32	0.000***	1.28-1.37
Age	0.99	0.050**	0.98-1.00	1.00	0.290	0.99-1.02
<b>Education level No education Ref</b>						
Primary	0.94	0.012**	0.89-0.99	0.98	0.378	0.93-1.03
Secondary and higher	0.95	0.011**	0.91-0.99	1.04	0.013**	1.01-1.08
<b>Employment Not working Ref</b>						
Currently working	1.02	0.147	0.99-1.06	1.00	0.813	0.97-1.03
<b>Marital status Single Ref</b>						
Married	1.04	0.017**	1.01-1.08	1.03	0.082*	0.99-1.05
<b>Sex of household head Male Ref</b>						
Female	1.04	0.029**	1.00-1.08	1.03	0.079*	0.99-1.07
Age of household head	0.99	0.034**	0.97-1.01	0.99	0.245	-1.00

Source: Analysis of NFHS-4 (2015-16) unit level data; \*\*\*significant at 1 per cent \*\*significant at 5 per cent \*significant at 10 per cent

## DISCUSSION

From the above results it can be seen that at all-India level, the percentage of women harboring HIV related stigma is higher than men. This finding is similar to findings by earlier studies based on Bangladesh and India on stigma related to tuberculosis, another infectious disease.<sup>13,14</sup> Stigma may be particularly acute for women as it may constrain their prospects of marriage, acceptance within the household or family and community participation.

Religion plays out differently as a stigma determining factor across the two genders. While non-Hindu men have lower probability of harboring HIV related reservation, non-Hindu women are more likely to be stigmatic about HIV. Age has no role in determining stigma among men, while women with higher age are less likely to have stigma. Interestingly, currently working adult men have greater likelihood of being conservative towards HIV, whereas employment status does not seem to affect attitude towards HIV among adult women. Another contrasting result relates to the impact of marital status on HIV related stigma. Likelihood of stigma is significantly lower among married men and higher among married women.

Finding of the study with respect to the impact of education on stigma around HIV resonates with conclusions by earlier studies.<sup>6,7</sup> A study attempting to determine the correlates of social stigma among Indian adults around tuberculosis, reports significantly higher stigma among women belonging to the middle and rich income classes. However, stigma was reported to be significantly lower among men from the rich income class.<sup>14</sup> On the contrary in the current study, the stigma fueling effect of higher economic class irrespective of gender is a finding to be noted, though in the context of HIV.

## CONCLUSION

The problem of HIV is exacerbated by inequalities in society. Providing accurate information about HIV and its path of transmission and addressing societal norms that fuel gender based discrimination can go a long way in fighting HIV related stigma. Popular social media like television can be used to spread knowledge of HIV and dispel negative attitudes towards the disease among the masses through character representations in programs and family shows with wide viewership. Supply side response in the form of the available healthcare apparatus for HIV should be complemented with attempts to generate adequate demand for HIV related healthcare among the masses, specially the high risk groups. In India, steps have been taken by the National AIDS Control Organization (NACO) to increase HIV related awareness among the general population, generate demand for care, treatment and support service and foster changes in beliefs, attitude and practices to reduce stigma and

discriminatory behaviour against PLHIV. In this regard, interventions like doorstep counselling should be designed in consideration of socioeconomically vulnerable groups and gender specific requirements to eliminate stigma around HIV and ensure optimal use of the available healthcare services.

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