

Associations between HIV and sexual stigmas, and mental health and alcohol use among MSM newly diagnosed with HIV in India: A longitudinal observational cohort study

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Background

- Little is known about the associations between HIV- and sexuality-related stigmas, and mental health and alcohol use among MSM living with HIV in India.
- The minority stress theory postulates that minority groups experience stress stemming from experiences of stigma, placing them at risk of negative psychosocial outcomes.
- We investigated the association between stigmas related to HIV and sexuality, and depression, anxiety, and alcohol use among MSM newly diagnosed with HIV (MSMLH) in India.

Methods

Study design

Prospective longitudinal cohort study with data collected at baseline, 3- and 6-months. Trained interviewers conducted study interviews by phone.

Participants

From 2020-2021, 227 MSM newly diagnosed with HIV in the past 6-months and registering at India HIV/AIDS Alliance's care and support centers (CSCs) were enrolled. MSM were identified by electronic records of the CSCs from 11 states with high HIV prevalence and by local CSC staff.

Alliance India, India's largest HIV service provider, is responsible for coordinating and implementing India's HIV response in partnership with National AIDS Control Organization, a branch of the Indian health ministry and provides free support services to more than 1.1 million people living with HIV (PLWH).

Inclusion criteria

- ❖ MSM diagnosed as HIV positive in the last 12 months
- ❖ Age - 18 years and above
- ❖ Assigned a male sex at birth
- ❖ Currently identifying as MSM
- ❖ Able to provide informed consent
- ❖ Fluent in their native language or English

Study measures

Predictors* [range]

- Enacted HIV stigma (discrimination), score [0-3]
- Internalised HIV stigma, score [0-3]
- Enacted sexual stigma (discrimination), score [0-3]
- Internalised sexual stigma, score [0-4]

Outcomes * [range]

- Depression (PHQ-9), score [0-27]
- Anxiety (GAD-2), score [0-6]
- Alcohol use (AUDIT-C), score [0-7]

*a higher score indicates more stigma, depression, anxiety, or alcohol use

Data analysis

We used three-wave data (baseline, 3- and 6-month follow-up).

Descriptive statistics:

Means, proportions, standard deviation, 95% Confidence interval.

Generalized estimating equations (GEE):

- ❖ GEE was used to obtain robust population-averaged estimates and to handle repeated measures.
- ❖ Multivariable analysis including four predictors in each of the outcome models.
- ❖ All models were adjusted for age.

Results

Participants' characteristics

- **Mean age:** 33.3 (SD 9.9) years.
- **Sexual identity:** 63.9% gay/queer/kothi/panthi, 12.8% bisexual, (12.8%) and 5.7% heterosexual
- **Education:** 18.5% illiterate, 36% completed higher secondary.
- **Employment status:** A majority were employed (81.5%)
- **Living status:** with their parents (60.3%) and female wives (26%).

Sample characteristics

❖ Mean ± SD scores of predictor variables

- Enacted HIV stigma (EHS) .58±.57
- Internalised HIV stigma (IHS) 1.16±.57
- Enacted sexual stigma 2.09±1.38
- Internalised sexual stigma (ISS) 1.80±.63

❖ Mean ± SD scores of outcome variables

- Depression 4.76 ± 7.32
- Anxiety 2.53 ± 2.31
- Alcohol use 0.32 ± 0.88.

Associations between HIV and stigmas, mental health and alcohol use

- Discrimination (i.e., enacted stigmas) significantly predicted depression, anxiety, and alcohol use (Table-1).
- An increase in enacted HIV and sexual stigma scores increased outcome scores. That is, for every unit increase in enacted HIV stigma, depression, anxiety, and alcohol scores increased by 7.32, 2.75, and .35 units, respectively.
- Similarly, for every unit increase in enacted sexual stigma, depression, anxiety, and alcohol scores increased by 1.24, .34, and .09 units, respectively.

Table 1. Predictors of mental health and alcohol use among men who have sex with men (MSM) newly diagnosed with HIV (N=227)

Predictors (scores)	Outcomes (scores)		
	Depression (PHQ-9)	Anxiety (GAD-2)	Alcohol (AUDIT-C)
Stigmas	Estimate (95% CI); p-value		
Enacted HIV stigma	7.32 (5.28, 9.36)***	2.75 (2.27, 3.23)***	0.35 (.07, .64)*
Internalised HIV stigma	-2.07 (-4.57, .43)	.15 (-.44, .74)	-.05 (-.29, .18)
Enacted sexual stigma	1.24 (.56, 1.93)***	.34 (.19, .50)***	.09 (.01, .17)*
Internalised sexual stigma	-1.39 (-3.03, .25)	.31 (-.18, .80)	.17 (-.05, .39)

Note. *p<.05, ***p<.001

Conclusions

- Enacted HIV and sexual stigmas (i.e., discrimination) contributed to poor psychosocial outcomes among MSM newly diagnosed with HIV.
- Findings call for stigma reduction interventions to reduce stigma and discrimination faced by MSMLH, and to screen for and address mental health challenges faced by MSMLH.