Associations between HIV-related stigma, sexual risk and alcohol use among MSM in India

Murali Shunmugam[1, 2], Ruban Nelson[1], Neeti Singhal[2], Venkatesan Chakrapani[1, 2], Peter A Newman[3]

[1]Centre for Sexuality and Health Research and Policy (C-SHaRP), [2]The Humsafar Trust, [3] Factor-Inwentash Faculty of Social Work, University of Toronto

Introduction

HIV-related stigma and alcohol use have been shown to influence sexual risk behavior among men who have sex with men (MSM) in western countries (e.g., Bruce et al., 2012; Hatzenbuehler et al., 2011).

Limited studies among Indian MSM have separately documented the associations between HIV-related stigma and sexual risk (Thomas et al., 2012), and alcohol use and sexual risk (Mimiaga et al., 2011), but not explicitly examined the associations between all three of these variables/constructs.

To help inform HIV prevention interventions, we examined the associations between HIV-related stigma, alcohol use and sexual risk among MSM.

Materials and Methods

Between May and October 2012, we conducted a cross-sectional survey among a venue-based sample of 400 MSM in Chennai and Mumbai.

Bivariate and logistic regression analyses were conducted to assess the relationship between problematic alcohol use (CAGE score≥2), HIV-related stigma (vicarious and felt normative stigma) and sexual risk behavior (condom use in last anal sex).

We measured HIV-related vicarious stigma (hearing stories about enacted stigma) and felt-normative stigma (an individual's awareness of or anticipation of stigma) using an adapted version of HIV-related stigma scale of Steward et al.'s (2008) study. We have used these HIV-related stigma subscales among MSM in Tamil Nadu, and those subscales had good reliability (Logie et al., 2012).

References

• Bruce, D., Kahana, S., Harper, G. W., Fernandez, M. I., & The ATN. (2012). Alcohol use predicts sexual risk behavior with HIV-negative or partners of unknown status among young HIV-positive men who have sex with men. *AIDS Care*. doi: 10.1080/09540121.2012.720363
• Hatzenbuehler, M. L., O'Cleirigh, C., Mayer, K. H., Mimiaga, M. J., & Safren, S. A. (2011). Prospective associations between HIV-related stigma, transmission risk behaviors, and adverse mental health outcomes in men who have sex with men. *Annals of Behavioral Medicine, .42*(2), pp. doi: 10.1007/s12160-011-9275-z 21533623
• Thomas, B., Mimiaga, M. J., Mayer, K. H., Perry, N. S., Swaminathan, S., & Safren, S. A. (2012). The influence of stigma on HIV risk behavior among men who have sex with men in Chennai, India. *AIDS Care, 24*(11), 1401-1406.
• Mimiaga, M. J., Thomas, B., Mayer, K. H., Reisner, S. L., Menon, S., Swaminathan, S., . . . Safren, S. A. (2011). Alcohol use and HIV sexual risk among MSM in Chennai, India. *Int J STD AIDS, 22*(3), 121-125.
• Steward, W. T., Herek, G. M., Ramakrishna, J., Bharat, S., Chandy, S., Wrubel, J., & Ekstrand, M. L. (2008). HIV-related stigma: adapting a theoretical framework for use in India. *Soc Sci Med, 67*(8), 1225-1235.
• 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. *Soc Sci Med, 74*(8), 1261-1268.

Results

Participants' mean age was 26 years (SD: 4.6). One-fourth (n=99/400) had completed high school, 21% (n=84/400) completed college degree and only 3.5% were illiterate. About two-fifths (44%; n=177/400) were private company staff, 21% (n=84/400) were unemployed and 9% (n=34/400) were sex workers. Seventy-one percent (n= 215/301) had a monthly income of <10000 INR. Less than 20% (n=68/400) were married. About two-fifths self-identified as kothi (43%; n=171/400), 27% (n=109/400) as double-decker, 13% (n=52/400) as panthi and 9% (n=36/400) as gay.

Fifty-seven percent (n=227/400) of the participants reported having drunk alcohol in the previous three months, among whom 31% (n=71/227) were identified to have problematic alcohol use.

Among problematic alcohol users, 83% were above 25 years of age, 25% were sex workers, 18% were married and 51% self-identified as kothi (Table 1).

In logistic regression analyses, problematic alcohol use and HIV-related stigma (total score) were found to be significantly associated with unprotected anal sex in last sexual encounter (Table 2).

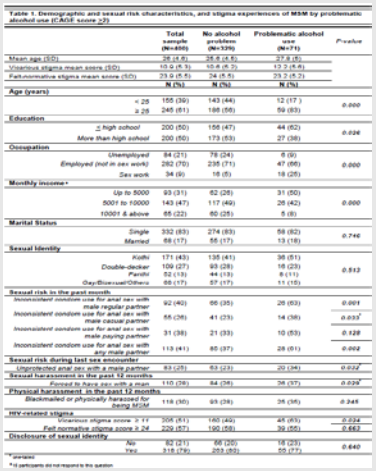

Table 1. Demographic and sexual risk characteristics, and stigma experiences of MSM by problematic alcohol use (CAGE score ≥2)

		Total sample (N=400)	No alcohol problems (N=329)	Problematic alcohol use (N=71)	P-value
Mean age (SD)		26 (4.6)	26.4 (4.6)	27.8 (5)	
Vicarious stigma mean score (SD)		10.9 (4.5)	10.4 (4.2)	13.2 (4.6)	
Felt-normative stigma mean score (SD)		23.9 (5.6)	24 (5.5)	23.2 (5.2)	
		N (%)	N (%)	N (%)	
Age (years)					
	< 25	155 (39)	143 (44)	12 (17)	0.000
	≥ 25	245 (61)	186 (56)	59 (83)	
Education					
	≤ high school	200 (50)	156 (47)	44 (62)	0.026
	More than high school	200 (50)	173 (53)	27 (38)	
Occupation					
	Unemployed	84 (21)	78 (24)	6 (9)	
	Employed (not in sex work)	282 (70)	235 (71)	47 (66)	0.000
	Sex work	34 (9)	16 (5)	18 (25)	
Monthly income*					
	Up to 5000	93 (31)	62 (26)	31 (50)	
	5001 to 10000	143 (47)	117 (49)	26 (42)	0.000
	10001 & above	65 (22)	60 (25)	5 (8)	
Marital Status					
	Single	332 (83)	274 (83)	58 (82)	0.746
	Married	68 (17)	55 (17)	13 (18)	
Sexual Identity					
	Kothi	171 (43)	135 (41)	36 (51)	
	Double-decker	109 (27)	93 (28)	16 (23)	0.513
	Panthi	52 (13)	44 (13)	8 (11)	
	Gay/Bisexual/Others	68 (17)	57 (17)	11 (15)	
Sexual risk in the past month					
	Inconsistent condom use for anal sex with male regular partner	92 (40)	66 (35)	26 (63)	0.001
	Inconsistent condom use for anal sex with male casual partner	66 (36)	41 (23)	14 (58)	0.033
	Inconsistent condom use for anal sex with male paying partner	31 (38)	21 (33)	10 (53)	0.128
	Inconsistent condom use for anal sex with any male partner	119 (41)	80 (37)	28 (61)	0.002
Sexual risk during last sex encounter					
	Unprotected anal sex with a male partner	83 (25)	63 (23)	20 (36)	0.022
Sexual harassment in the past 12 months		110 (29)	84 (28)	26 (37)	0.029
Physical harassment in the past 12 months					
	Blackmailed or physically harassed for being MSM	118 (30)	93 (28)	25 (35)	0.245
HIV-related stigma					
	Vicarious stigma score ≥ 11	205 (51)	160 (49)	45 (63)	0.024
	Felt normative stigma score ≥ 24	229 (57)	190 (58)	39 (55)	0.663
Disclosure of sexual identity					
	No	82 (21)	66 (20)	16 (23)	0.640
	Yes	318 (79)	263 (80)	55 (77)	

* Overseas
** 8 participants did not respond to this question

Table 2. Alcohol Use and Stigma as Predictors of Sexual Risk Behavior of MSM in Chennai and Mumbai, n=400

Variable	Unprotected anal sex in last sexual encounter: Adjusted Odds Ratio (95% Confidence Interval)	P-value
Age (years)		
< 25	1	
≥ 25	0.43 (0.22 - 0.85)*	0.015
Education		
≤ high school	1	
More than high school	0.48 (0.24 - 0.95)*	0.035
Occupation		
Not in sex work	1	
Sex worker	0.60 (0.29 - 1.29)	0.127
Monthly income		
Up to 5000	1	
5001 & Above	0.60 (0.29 - 1.24)	0.173
Marital Status		
Single	1	
Married	0.80 (0.31 - 2.04)	0.641
Problematic alcohol use (CAGE score ≥ 2)		
No	1	
Yes	2.23 (1.04 - 4.77)*	0.039
HIV-related stigma#	1.04 (1.00 - 1.07)*	0.024
Consumption of alcohol before last anal sex$		
No	1	
Yes	6.41 (2.25 - 18.22)***	0.000

*p< .05; **p< .01; ***p< .001
Total score of vicarious and felt normative HIV-related stigma
$ Data for this variable was available only for Chennai site (n = 152/200). The AOR reported here is from the separate analysis of Chennai data with the same set of variables.

Conclusions

Our findings provide empirical evidence for the associations between HIV-related stigma, problematic alcohol use and sexual risk behavior.

Further research is needed to examine the mechanisms of these associations and possible differences by type and gender of partners of MSM.

HIV prevention interventions for MSM need to include information on alcohol use-related sexual risk behaviors and screening for problematic alcohol use along with treatment referrals. Also, structural interventions are needed to decrease HIV-related stigma both among the general public and within the MSM communities.

Acknowledgements: This analysis is part of the research project supported by grants from the Canadian Institutes of Health Research (MOP-102512; THA-118570), the Canada Research Chairs program and the Canada Foundation for Innovation.