



Authors: Aleena Sebastian,¹ Jasvir Kaur,² Ruban Nelson,³ Murali Shunmugam,³ Venkatesan Chakrapani³

Affiliations: ¹National Institute of Advanced Studies (NIAS), Bangalore, India; ²Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, India; ³Centre for Sexuality and Health Research and Policy (C-SHaRP), Chennai, India

Background

- In India, transgender women (TGW) and Men who Have Sex with Men (MSM) has elevated risk for HIV and inequitable healthcare access due to structural inequalities and stigma in healthcare settings.
- High prevalence of substance use, condomless sex and sex work (especially among TGW) are risk factors for acquiring Hepatitis-B infection
- Hepatitis-B vaccination is a cost-effective measure for preventing Hepatitis-B; however, it is not free for MSM and TGW adults.

Specific Aims & Objectives

To assess the status of Hepatitis-B Vaccination (HBV) among a cohort of MSM and TGW in Chennai, a South Indian city

Methods

Study design:

- Cross-sectional study (Sept. to December 2022)

Survey:

- Online (self-administered)
- Offline (in-person, interviewer administered)

Sample size: 500 (250 MSM, 250 TGW)

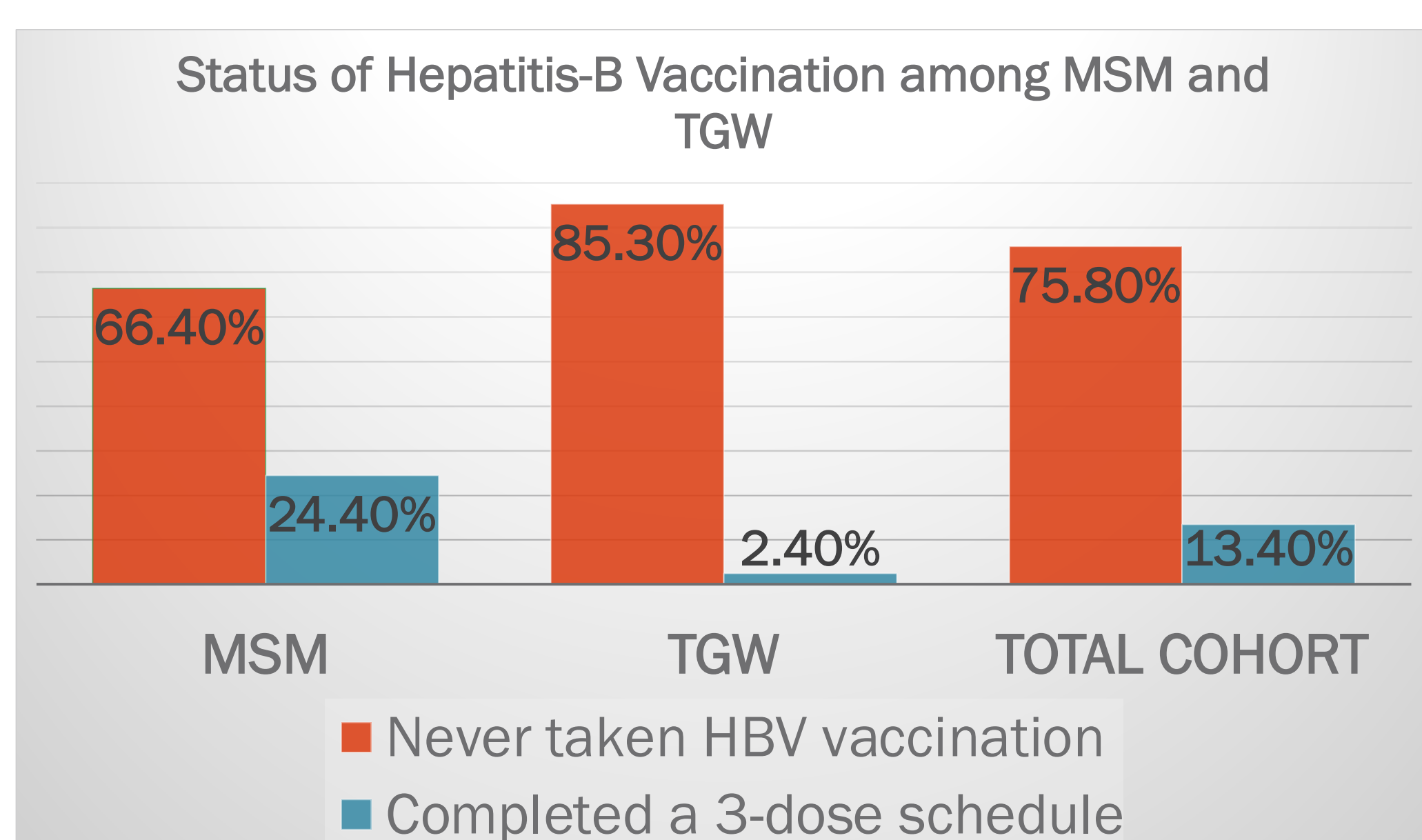
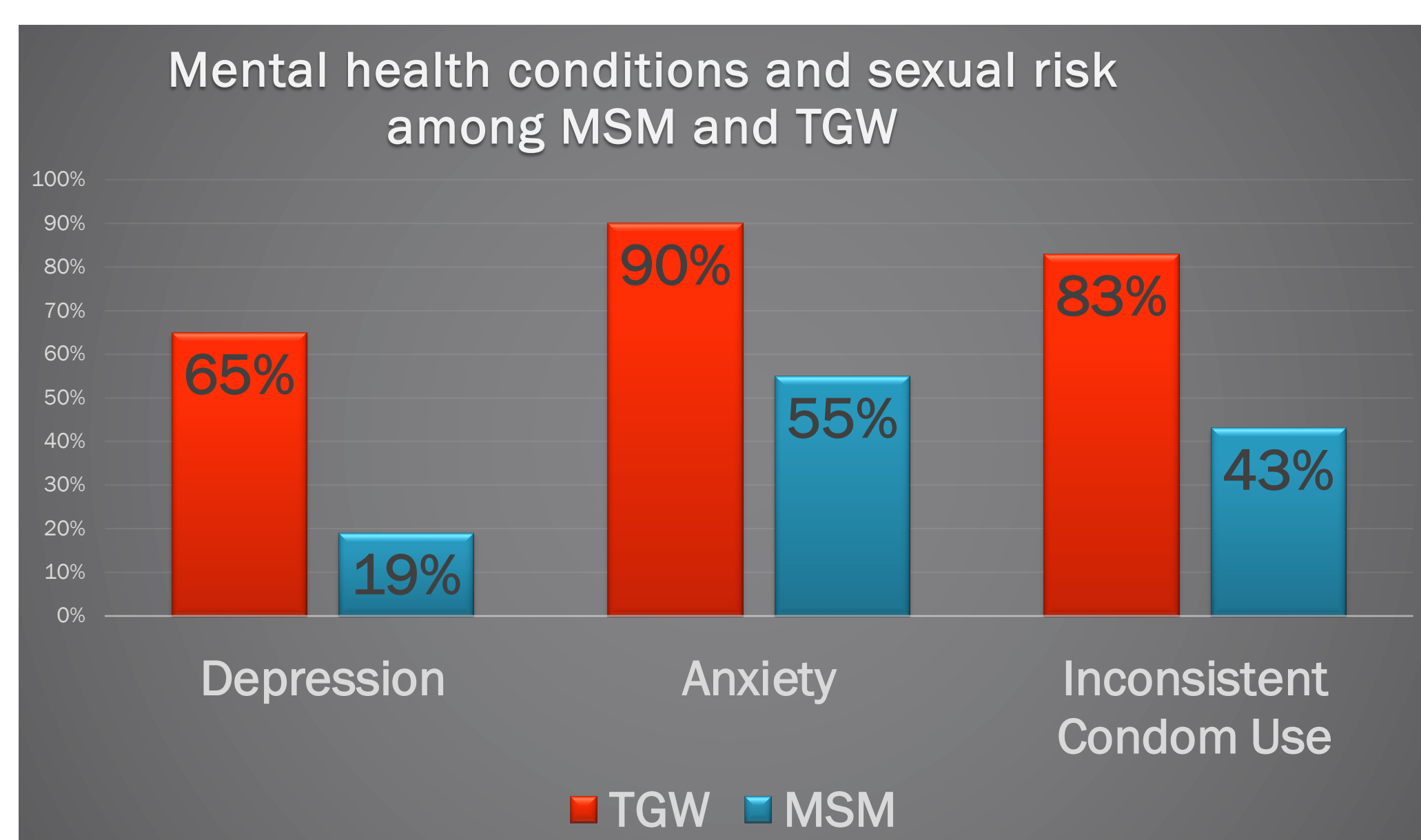
Data collection:

- Sociodemographic characteristics
- Prevalence of mental health conditions
- HBV status (3-dose schedule)

Data Analysis:

- Multivariable Poisson analysis
- Estimates are Incident Rate Ratios (IRRs) – exponentiated coefficients

Graphs/Figures



Results

- Mean age: MSM- 30 (SD 6.8), TGW- 29 (SD 5.7)
- Engagement in Sex work: MSM 29%, TGW 62%
- College degree or diploma: 54.5%
- TGW had more non-regular male sexual partners (Mean=86.4±58.5) in the past month than MSM (Mean=5.4±9.5).
- Only 13.4% (MSM: 24.4%; TGW: 2.4%) participants reported having completed a 3-dose HBV vaccination schedule. Multivariable analyses among the MSM sample revealed that those who were depressed were 72% (IRR=0.28, 95% CI 0.10, 0.76, p=0.01) less likely to have completed HBV, compared to those who were not depressed.
- HBV status did not differ by sex work status (IRR=.79, 95% CI .47, 1.35, p=.39)
- Among the TGW sample, those who reported inconsistent condom use were 88% (IRR=0.12, 95% CI 0.02, 0.69, p=0.02) less likely to have completed HBV, compared to consistent condom users. As the age increases by one year, there was a 10% (IRR=1.10; 95% CI 1.03, 1.19; p=0.01) higher likelihood of having completed HBV vaccination.

Conclusions

- **Hepatitis-B vaccination status was found to be low among MSM and TGW, amid high levels of engagement in sex work and condomless anal sex.** These findings indicate an urgent need for developing effective interventions aimed to increase awareness, vaccine acceptance and uptake among SGM communities, by involving community members and stakeholders to understand the barriers and challenges.
- Existing HIV-prevention interventions implemented by National AIDS Control Organization (NACO) need to incorporate an educational component on HBV and take steps to offer subsidized/free HBV vaccination.

Acknowledgements

- **Funded by:** International AIDS Vaccine Initiative (IAVI)
- Indian Council of Medical Research (ICMR), India
- National Institute of Advanced Studies (NIAS), India
- Centre for Sexuality and Health Research and Policy (C-SHaRP), India
- Postgraduate Institute of Medical Education and Research (PGIMER), India
- Sahodaran & Thozhi (CBOs), India

References

- Rhodes, S. D., Diclemente, R. J., Yee, L. J., & Hergenrather, K. C. (2000). Hepatitis B vaccination in a high risk MSM population: the need for vaccine education. *Sexually Transmitted Infections*, 76 (5), 408-409. doi: 10.1136/sti.76.5.408-a
- Moradi, G., Soheili, M., Rashti, R., Dehghanbanadaki, H., Nouri, E., Zakaryaei, F., . . . Moradi, Y. (2022). The prevalence of hepatitis C and hepatitis B in lesbian, gay, bisexual and transgender populations: a systematic review and meta-analysis. *Eur J Med Res*, 27 (1), 47. doi: 10.1186/s40001-022-00677-0
- White, P., O'Donnell, K., Brennan, A., Davoren, M., Lyons, F., Quinlan, M., . . . Barrett, P. (2022). Hepatitis A and B vaccination in gbMSM in Ireland: findings from the European MSM Internet Survey 2017 (EMIS-2017). *Sexually Transmitted Infections*. doi: 10.1136/sextrans-2022-055580

