

Using Factor Analyses To Understand The Attitudes Of Australian Gay And Bisexual Men Towards New HIV Prevention Technologies.

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Background: The contemporary response to HIV embraces biomedical prevention, particularly treatment as prevention (TasP) and pre-exposure prophylaxis (PrEP). However large scale implementation of biomedical prevention ideally should be preceded by assessments of their community acceptability. We aimed to understand attitudes of Australian gay and bisexual men (GBM) towards biomedical-based HIV prevention.

Methods: A cross-sectional, online survey of GBM has been conducted annually in Victoria, Australia since 2008. Men ≥ 18 years were recruited online, mainly through social networking sites. In 2016, the survey introduced 35 attitudinal items on biomedical HIV prevention including TasP and PrEP. Items were scored on five-point Likert scales. We used principal factor analysis to identify key constructs related to GBMs attitudes to biomedical HIV prevention and use these to characterise levels of support for TasP and PrEP.

Results: A total of 462 HIV-negative or HIV status unknown men, not using PrEP, provided valid responses for all 35 items in the 2016 survey. We extracted four distinguishable and interpretable factors which we named; "Confidence in PrEP", "Judicious approach to PrEP", "Treatment as prevention optimism" and "Support for early treatment". High levels of agreement were seen across PrEP-related items; 77.9% of men agreed that PrEP prevented HIV acquisition and 83.6% of men agreed that users were protecting themselves. However, agreement levels for HIV treatment as prevention items were considerably lower, with $< 20\%$ of men agreeing treatment (undetectable viral load) reduced HIV transmission risk.

Conclusion: Increased understanding of community attitudes is a crucial part of shaping policy and informing initiatives that aim to improve knowledge, acceptance and uptake of biomedical prevention. Our analysis suggests confidence in, acceptability of and community support for PrEP among GBM. However there appears to be scepticism towards HIV treatment when used for prevention that may need to be addressed to optimise HIV prevention strategies that emphasise TasP.

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