

The Additive Effects of Depressive Symptoms and Polysubstance Use on HIV Risk Among Gay, Bisexual and other Men who have Sex with Men

How does the combination of depressive symptoms and polysubstance use relate to HIV risk among gay, bisexual, and other men who have sex with men in Metro Vancouver, Canada?

What is the importance of this study?

- Increased rates of sexual risk behaviours have been found among gay, bisexual and other men who have sex with men (gbMSM) with adverse mental health conditions.
- One explanation for this association is the high prevalence of substance use among individuals living with depression.
- Substance use has similarly been linked to increased HIV-risk behaviour such as condomless anal sex.

FACT BOX

Syndemics theory refers to the additive effects of two or more health conditions that contribute to excess burden of disease among vulnerable persons.

How was this study conducted?

- High-risk sexual behaviour was assessed by asking participants to report the HIV status of sexual partners with whom they had had condomless anal sex (CAS) with in the past six months. Those who reported CAS with a partner whose HIV status was different than their own were classified as having engaged in “high-risk sex”.
- Participants were asked about their substance use behaviour over the past six months within a number of categories including stimulants, methamphetamine, inhalants, sedatives, hallucinogens, opioids, erectile dysfunction drugs, poppers and cannabis.
- Participants completed a screening tool to assess their symptoms of depression.

What are the key study findings?

- A total of 19.0% of gbMSM had moderate or severe depression scores and 36.1% reported using ≥ 3 substances (excluding alcohol).
- 35.9% of gbMSM reported having CAS with a partner whose HIV status was different than their own or unknown (classified as high-risk sex).
- Alcohol use was not found to be associated with increased prevalence of high-risk sex.
- After adjusting for confounders, the combined effects of polysubstance use and depressive symptoms were associated with increased odds of reporting high-risk sex.



- The greater the number of substances used or the more severe the level of depression resulted in a higher likelihood of reporting high-risk sex.

What do these findings mean?

- Alcohol use in gbMSM may not necessarily be a driving factor for behaviour related to risk of acquiring of HIV.
- There is an interaction effect between polysubstance use (≥ 3 or more substances used in the past six months) and depressive symptoms. The combination of these factors was associated with a greater likelihood of high-risk sex. This supports a syndemic understanding of gbMSM's sexual behaviour and HIV risk (meaning, looking at the additive effects of two or more health conditions that contribute to excess burden of disease among vulnerable persons).
- This research highlights the importance of considering the combined effects of depression and substance use during provision of care and health promotion targeted towards those at the greatest risk for HIV infection. Holistic care should address the combination of both factors.

What is the BC-CfE Momentum Health Study?

Evidence from British Columbia and elsewhere has demonstrated the expansion of access to antiretroviral HIV treatment (ART) can result in population-level reductions in HIV incidence. This is the concept behind the made-in-BC Treatment as Prevention[®] strategy, or TasP[®], which aims to expand early HIV testing and treatment to improve patients' health and curb the spread of HIV. Gay, bisexual and other men who have sex with men (gbMSM) represent the most affected HIV risk group, both in BC and Canada. The BC-CfE Momentum Health Study is designed to measure changes in HIV risk behaviour, attitudes toward TasP[®] and the proportion of HIV-positive gbMSM with unsuppressed viral load over time in the Vancouver region. The study uses respondent-driven sampling (RDS) to obtain a more representative sample reflecting the diversity of the gbMSM population in Vancouver.

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