

Inclusion of a broader range of sexual orientations to strengthen the validity and generalizability of findings

Dear Editor:

Re: Cragg A, Steenbeek A, Asbridge M, Andreou P, Langille D. Sexually transmitted infection testing among heterosexual Maritime Canadian university students engaging in different levels of sexual risk taking. *Can J Public Health* 2016;107(2):e149–54.

Sexually transmitted infections (STI) are a significant health concern, with half of all new STI occurring among young people aged 15–24 years.¹ The Public Health Agency of Canada (PHAC) and the Centers for Disease Control (CDC) recommend routine STI testing for all sexually active individuals under age 25.^{2,3} In Canada, university-aged individuals have the highest rates of STI.¹ Prior to the study by Cragg et al., there have been limited data for this demographic. Other studies have investigated HIV testing in college students⁴ but not bacterial STI testing in Canada. It was evident from the investigation that PHAC recommendations are currently not being met in this demographic, as 66% of heterosexual maritime university students had never been tested for STI.

A study hypothesis was generated and suggested many university students engaging in high-risk sexual behaviour are not being tested for STI.¹ While it is appreciated that the population examined for the purpose of this study was “completely” heterosexual university students, I believe the exclusion of men who have sex with men (MSM) and bisexual students is a strong limitation. MSM and bisexual men are at greater risk for STI when compared to heterosexual populations.⁵ High-risk groups drive STI transmission, with men having sex with men being the largest single high-risk group in many countries.⁶ Of particular significance is the higher rates of STI in young MSM.⁶

By excluding those not “completely heterosexual”, 2240 students were not eligible to participate in the study. This exclusion may be viewed as offensive and discriminatory by some students and possibly affected the survey response rate. Ultimately, this reduced the sample size and greatly affected generalizability and validity of the study findings. Furthermore, including MSM and bisexual students would be more reflective of a true university population. The investigation was valuable, however, the findings could have been strengthened by broadening the inclusion criteria and offering participation to those students who identified as “not completely” heterosexual.

Shianne Combden, BNRN, CCHN(C), IBCLC

Memorial University of Newfoundland, St. John's, NL

Correspondence: Shianne Combden, Shianne.combden@easternhealth.ca

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REFERENCES

1. Cragg A, Steenbeek A, Asbridge M, Andreou P, Langille D. Sexually transmitted infection testing among heterosexual Maritime Canadian university students engaging in different levels of sexual risk taking.

1. *Can J Public Health* 2016;107(2):e149–54. PMID: 27526211. doi: 10.17269/cjph.107.5036.
2. Public Health Agency of Canada. *Canadian Guidelines on Sexually Transmitted Infections*. Ottawa, ON: PHAC, 2015. Available at: <http://www.phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/index-eng.php> (Accessed November 25, 2016).
3. Centers for Disease Control and Prevention. *Chlamydial Infections in Adolescents and Adults*. Atlanta, GA: CDC, 2015. Available at: <https://www.cdc.gov/std/tg2015/chlamydia.htm> (Accessed November 28, 2016).
4. Caldeira K, Singer B, O'Grady K, Vincent K, Arria A. HIV testing in recent college students: Prevalence and correlates. *AIDS Educ Prev* 2012;24(4):363–76. PMID: 22827905. doi: 10.1521/aeap.2012.24.4.363.
5. Remis R, Liu J, Loutfy M, Tharao W, Rebbapragada A, Huibner S, et al. Prevalence of sexually transmitted viral and bacterial infection in HIV-negative men who have sex with men in Toronto. *PLoS ONE* 2016; 11(7):e0158090. PMID: 27391265. doi: 10.1371/journal.pone.0158090.
6. Koedijk F, van Banthem B, Vrolings E, Zuilhot W, van der Sande M. Increasing sexually transmitted infection rates in young men having sex with men in the Netherlands, 2006–2012. *Emerg Themes Epidemiol* 2014;11:12. PMID: 25170341. doi: 10.1186/1742-7622-11-12.

In response to Combden letter

We agree that by including only heterosexual students in these analyses, the results cannot be generalized to all Maritime Canadian university students, but we believe our findings for heterosexual students are generalizable to that group. The online survey which collected these data included all undergraduate students at the participating institutions; students of all sexual orientations were asked to participate. Unfortunately, a technical glitch resulted in a paucity of data for partner numbers and condom use among men who only had sex with men. We excluded participants missing these variables because we were unable to classify them as higher or lower risk based on their sexual behaviours. Our initial analyses were performed including individuals of all sexual orientations, but because men who have sex with men were under-represented, it was necessary to group bisexual and homosexual individuals into one category (i.e., non-heterosexual).¹ Thomas et al. found that bisexual and homosexual individuals behaved differently in accessing HIV testing services;² we hypothesized that bisexual and homosexual students may also be tested for STI at different rates and concluded that grouping these individuals was less than ideal. Also, because we only had access to data from non-heterosexual men who had had vaginal sex, we felt that conclusions based on these data would not be generalizable to all bisexual and homosexual male students. For these reasons, our final analyses were limited to heterosexual students. While this reduced our sample size, we believe that it improved the overall validity and generalizability of our study findings.

Amber Cragg, MSc, BEd, Audrey Steenbeek, PhD, RN, Mark Asbridge, PhD, Pantelis Andreou, PhD, Donald Langille, MD, MSc

REFERENCES

1. Cragg A. *Understanding STI and HIV Testing Rates among Higher Risk University Students*. Halifax, NS: Dalhousie University, 2014.
2. Thomas P, Voetsch A, Song B, Calloway D, Goode C, Munday L, et al. HIV risk behaviors and testing history in historically black college and university settings. *Public Health Rep* 2008;123(Suppl 3):115–25. doi: 10.1177/003335490812305314.