

Factors associated with acceptability of online sexually transmitted and blood-borne infection (STBBI) testing in sexual minority men living in Ontario

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Background

- Gay, bisexual, and other men who have sex with men (**GBM**) are **disproportionately affected by sexually transmitted and blood-borne infections (STBBIs)**.
- **Online STBBI testing could help address barriers to in-person clinical testing services among GBM.**
- We previously found **high acceptability of online STBBI testing among GBM living in Ontario (80.9%)**.
- In this study **we examined factors that may be associated with acceptability.**

Methods

- **Sex Now 2019 is an online national bilingual cross-sectional survey of GBM, non-binary, and Two-Spirit individuals aged ≥ 15 conducted from November 2019 to February 2020.**
- **Participants in Ontario were asked if they were likely or unlikely to use an online STBBI testing service.**
- **Prevalence ratios (PR) and 95% confidence intervals (95% CI) for univariate and multivariable analysis were calculated using modified Poisson regression with robust variances due to convergence issues when using log-binomial regression.**
- The multivariable model was built using the iterative Hosmer-Lemeshow-Sturdivant approach.

Acceptability of Online STBBI Testing by Variables of Interest (n=1355)

Variable		Unadjusted PR (95% CI)	Adjusted PR (95% CI)
Continuous Variables	Median (SD) Likely / Median (SD) Sample		
Age	36 (12.4)/37 (13.0)	0.993 (0.991 – 0.996)*	0.993 (0.991 – 0.996)*
N of different types of sexual behaviours in P6M (0-8)	2 (2.0)/2 (2.0)	1.026 (1.013 – 1.039)*	1.034 (1.020 – 1.049)*
N of different types of healthcare experiences (0-8)	6 (1.7)/6 (1.7)	1.012 (0.995 – 1.029)	0.999 (0.980 – 1.018)
N of different forms of discrimination experienced (0-5)	1 (0.9)/1 (0.9)	1.027 (1.000 – 1.055)*	1.017 (0.984 – 1.051)
Categorical Variables	n Likely / N Sample (%)		
Gender			
Cis man	988/1227 (80.5%)	1.000 (Reference)	1.000 (Reference)
Trans man	56/68 (82.4%)	1.023 (0.913 – 1.146)	1.011 (0.885 – 1.155)
Other gender identities	44/60 (73.3%)	0.911 (0.780 – 1.063)	0.877 (0.752 – 1.023)
Race/ethnicity			
White only	815/1031 (79.0%)	1.000 (Reference)	1.000 (Reference)
Indigenous (all)	42/54 (77.8%)	0.984 (0.850 – 1.139)	1.084 (0.955 – 1.230)
Other racial/ethnic groups	231/270 (85.6%)	1.082 (1.021 – 1.147)*	0.983 (0.912 – 1.059)
Born in Canada			
Yes	837/1066 (78.5%)	1.000 (Reference)	1.000 (Reference)
No	251/289 (86.9%)	1.106 (1.047 – 1.168)*	1.099 (1.026 – 1.177)*
Sexual orientation			
Bisexual &/or Pansexual only	109/145 (75.2%)	0.921 (0.835 – 1.017)	0.970 (0.876 – 1.073)
Gay only	669/820 (81.6%)	1.000 (Reference)	1.000 (Reference)
Other sexual orientations	310/390 (79.5%)	0.974 (0.918 – 1.035)	0.952 (0.894 – 1.013)

*Statistically significant at p < 0.05.

Acceptability of Online STBBI Testing by Variables of Interest (n=1355)

<i>Categorical Variables (continued)</i>	<i>n Likely / N Sample (%)</i>	<i>Unadjusted PR (95% CI)</i>	<i>Adjusted PR (95% CI)</i>
Outness			
1: Not out	67/95 (64.2%)	0.874 (0.764 – 0.999)*	0.960 (0.836 – 1.101)
2/3/4: Out to few/some/many people	364/446 (81.6%)	1.011 (0.957 – 1.069)	0.999 (0.944 – 1.056)
5: Out to all or most people	657/814 (80.7%)	1.000 (Reference)	1.000 (Reference)
Geography			
Large urban centre (100,000+ people)	854/1049 (81.4%)	1.000 (Reference)	1.000 (Reference)
Medium city/town (30,000-99,999 people)	117/148 (79.1%)	0.971 (0.899 – 1.060)	0.994 (0.911 – 1.086)
Small city/town or rural area (<30,000 people)	117/158 (74.1%)	0.910 (0.826 – 1.002)	0.948 (0.860 – 1.046)
Employment			
Works full time only	575/697 (82.5%)	1.000 (Reference)	1.000 (Reference)
Currently works	289/357 (81.0%)	0.981 (0.923 – 1.043)	0.974 (0.915 – 1.037)
Does not currently work	224/301 (74.4%)	0.902 (0.837 – 0.972)*	0.942 (0.874 – 1.015)
Education			
Did not finish high school	28/43 (65.1%)	0.802 (0.643 – 1.000)*	0.798 (0.648 – 0.984)*
High school, or equivalent	165/210 (78.6%)	0.967 (0.896 – 1.044)	0.948 (0.875 – 1.028)
Post-secondary school (e.g., certificate, diploma, bachelor's, master's, doctorate)	895/1102 (81.2%)	1.000 (Reference)	1.000 (Reference)
PrEP use			
Yes, I'm taking PrEP now!	195/240 (81.3%)	1.003 (0.937 – 1.073)	0.893 (0.827 – 0.965)*
No (never used and used before)	780/963 (81.0%)	1.000 (Reference)	1.000 (Reference)
Diagnosed with HIV	113/152 (74.3%)	0.918 (0.832 – 1.013)	0.908 (0.817 – 1.008)

*Statistically significant at p < 0.05

Discussion and Conclusion

- **Acceptability of online STBBI testing was high (80.9%) in our sample and certain subpopulations of GBM were more likely to use an online STBBI testing service.**
- **Younger GBM and GBM who have completed post-secondary education may be more likely to use online STBBI testing due to increased digital health literacy.**
- **Current PrEP users already get regularly tested for STBBIs to obtain their prescription, so they may be less interested in switching to a different testing service for this reason.**
- **GBM engaging in a number of different sexual behaviours may be more likely to use online STBBI testing since it decreases interactions with healthcare providers who may be judgmental about said behaviours.**
- **GBM born outside of Canada may be more likely to use online STBBI testing because they would not have disclose their sexual history to a service provider who may also share the same cultural background as them.**
- **Online STBBI testing may be able to address barriers to testing these various groups may experience and expanding access to this service among these groups in Ontario may reduce the burden of STBBIs in these subpopulations and GBM as a whole over time.**

For more information about the Digital Sexual Health Initiative, please visit this link: <https://dishiresearch.ca/>