

An Event-Level Analysis of Condomless Anal Sex among Gay, Bisexual, and Other Men Who have Sex with Men (GBM) with Online-met Partners

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Background

- Previous work has shown that online sex-seeking (OSS) men engage in higher rates of condomless anal sex (CAS), and possibly higher rates of seroadaptation [1].
- Little is known about social factors influencing CAS risk among online-met partners.
- Our Objective** was to identify the social, communal, and situational covariates of CAS among men with online-met partners.

Methods

Study Setting. We recruited sexually active GBM, aged ≥ 16 throughout Metro Vancouver using Respondent Driven Sampling between February 2012 and February 2014 into a prospective cohort. Follow-up occurred at six months for up to 7 visits per participant. Participants completed a computer-administered questionnaire regarding their most recent sexual encounter with their five most recent sexual partners. In the present analysis we considered events in which the participant met their sexual partner online. After completing the computer-administered questionnaire, participants were screened for HIV and other sexually transmitted infections by a study nurse.

Explanatory Variables. Age, sexual orientation (gay, bisexual, other), race/ethnicity (white vs. other), annual income ($< \$30k$, $\$30-60k$, $\geq 60k$), GBM network size, “closeness” to GBM, level of social support (study $\alpha=0.85$), communal sexual altruism ($\alpha=0.88$), loneliness ($\alpha=0.77$), self-esteem ($\alpha=0.88$), importance of gay community ($\alpha=0.81$), Hospital Anxiety/Depression Scale (HADS) anxiety ($\alpha=0.84$) and depression ($\alpha=0.79$), a PCA component measuring Gay Sociality ($\alpha=0.42$, social time spent with GBM, gay bar/club attendance, gay sports team participation), a PCA component measuring Community Engagement ($\alpha=0.41$, attendance at gay group meetings, gay media consumption, and pride parade participation), serostatus sharing (100% sure seroconcordant, 100% sure serodiscordant, Unsure/Unknown), seroadaptive strategies, HIV-testing, serodiscordant/unknown condomless anal sex (sduCAS), location of sex event, and number of sexual encounters with event-level partner.

Outcome Variable. Condomless anal sex (CAS) at event (any vs. none).

Statistical Analysis. All analyses were completed in SAS v. 9.4. Stratified by participant HIV-status, the covariates of event-level CAS (vs. none) with partners met online were modeled using generalized estimating equations (PROC GEE) to construct hierarchical logistic regression (within participant, within visit). Our model-building processes used backwards selection with Type-III p-values and AIC minimization.

Results

Descriptive Results

- In our sample 77.0% ($n=414/538$) of HIV-negative and 68.2% ($n=144/211$) of HIV-positive men reported sex with an online-met partner.
- Nearly half of all sexual events reported by GBM over the study period were with partners met online ($n=4061/8137$, 49.9%).
- Over successive follow-up visits, the proportion of men reporting online sex seeking declined ($p=.006$) and the proportion reporting an event-level online-met partner remained stable ($p=0.97$). (Figure 1.)

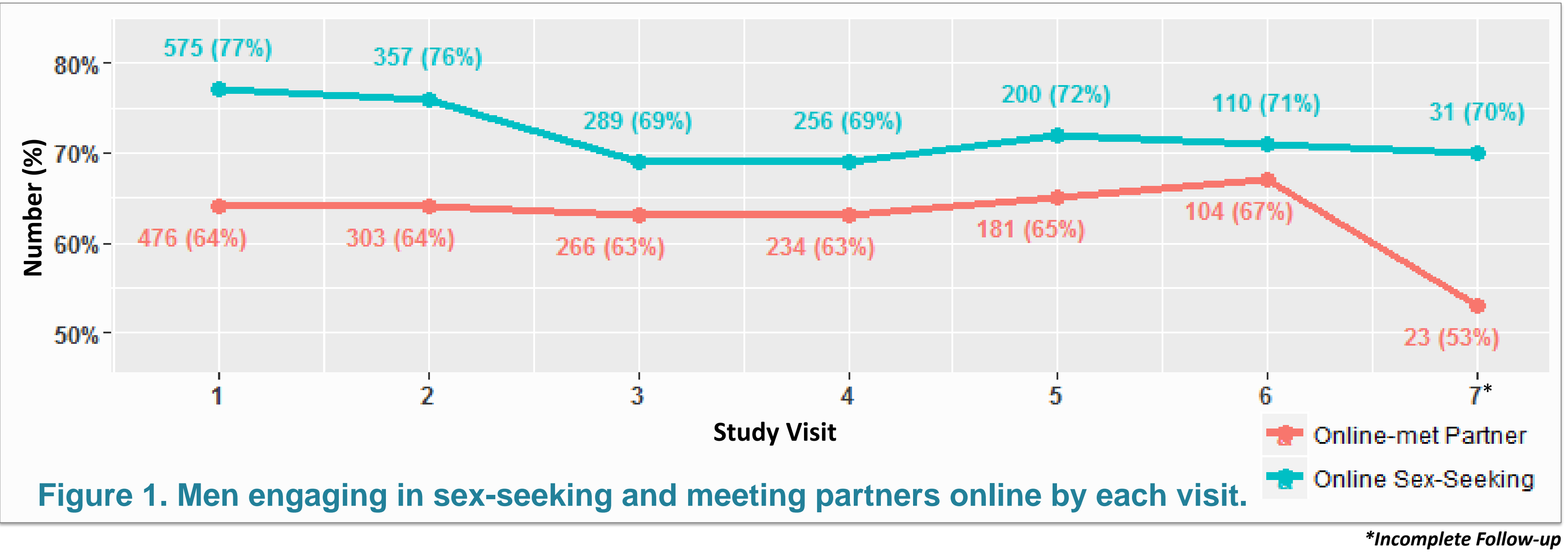


Figure 1. Men engaging in sex-seeking and meeting partners online by each visit.

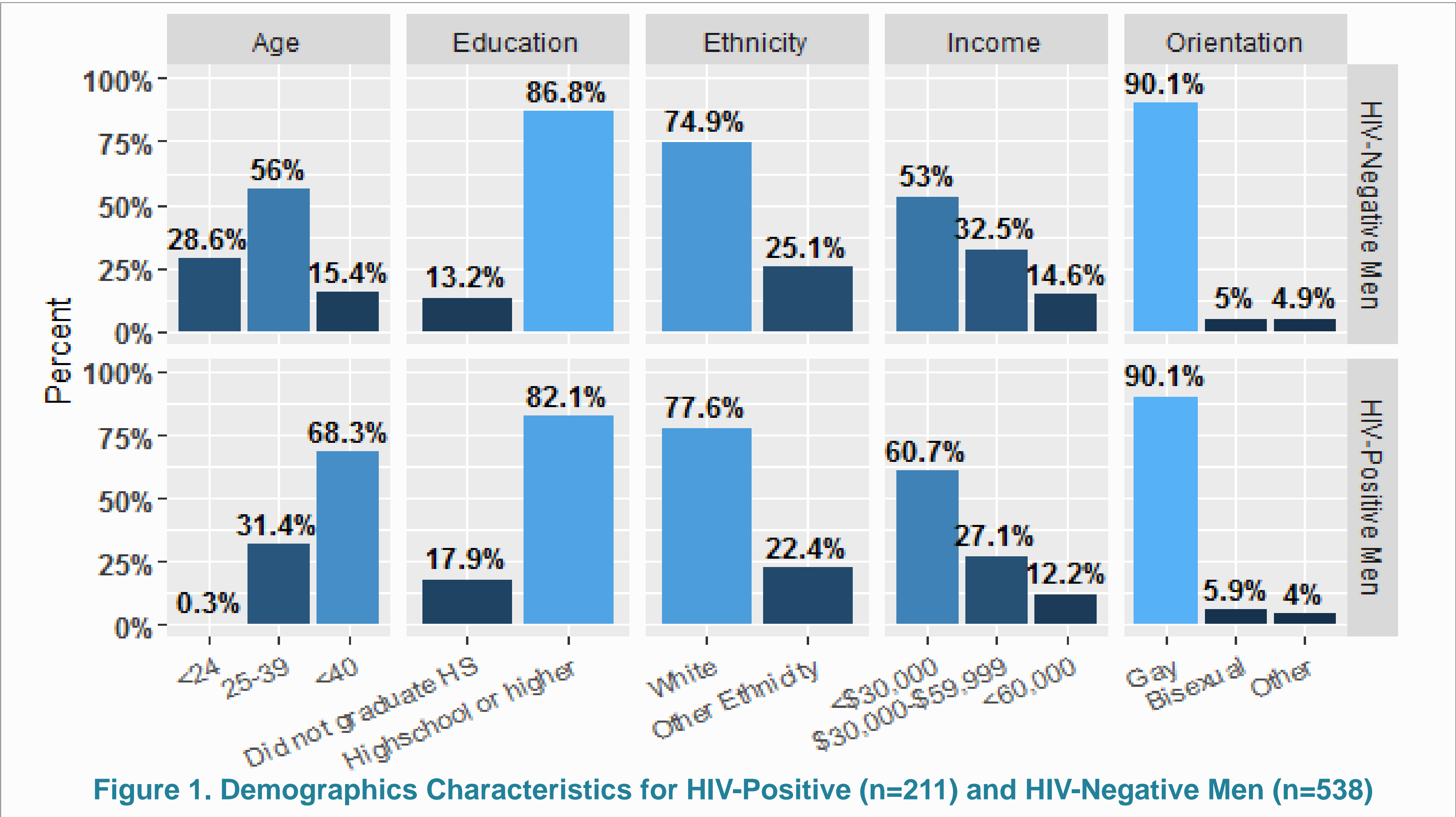


Figure 1. Demographics Characteristics for HIV-Positive (n=211) and HIV-Negative Men (n=538)

Multivariable Results for Social Predictors (Figure 3)

- CAS among HIV-negative men was predicted by higher emotive connection to the gay community (as measured by Collective Self-Esteem), being “close” to more GBM, lower Gay Sociality and lower sexual altruism towards the gay community.
- For HIV-positive men, sexual altruism towards the gay community was the only significant social predictor of CAS on either the bivariate or multivariable levels.

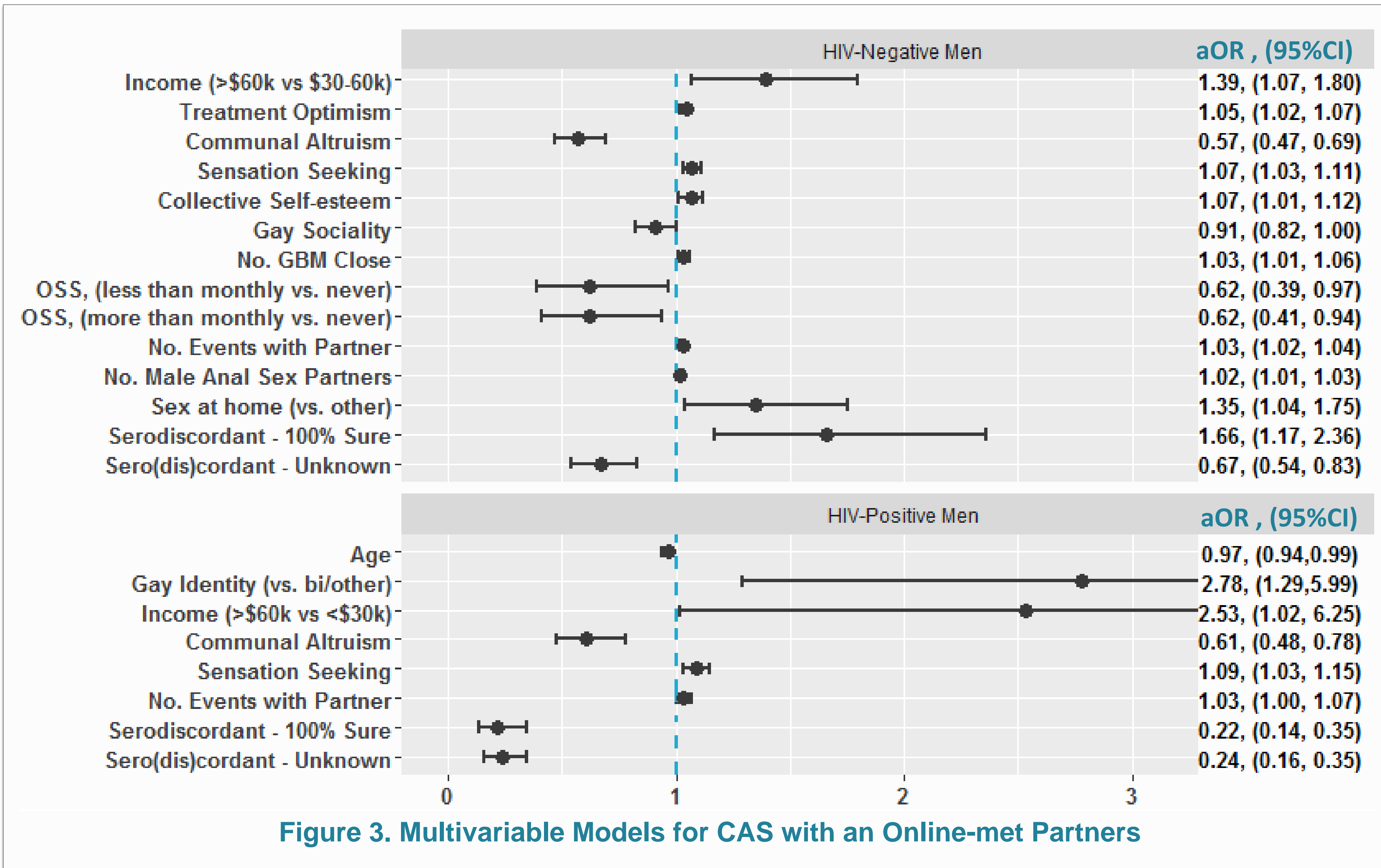


Figure 3. Multivariable Models for CAS with an Online-met Partners

Conclusions

- Our findings suggest that interpersonal factors play an important role in shaping the condom use patterns of HIV-negative men meeting partners in online contexts.
- Partner Serostatus appears to be a major situational factor for condom use for HIV-positive and HIV-negative men.
- Further research is needed on how social factors, norms, and motivators are shaped in peer networks, and on what effect peer-driven interventions may have in online settings.

References

1. JA. Lewnard & L. Barrang-Ford, “Internet-based Partner Selection and risk for unprotected anal intercourse in sexual encounters among men who have sex with men: a meta-analysis of observational studies. *Sex Transm Infect.* 2014.