HOMOPHILY IN THE SOCIO-SEXUAL NETWORKS OF GAY AND BISEXUAL MEN

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Background

- Kenyon & Delva (2018, "*It's the network, stupid*") argue that the elevated prevalence of sexually transmitted infections (STIs) in sub-populations is due to the structure of their socio-sexual networks.
- Homophily, which measures the degree to which individuals associate with those like themselves, has been regularly identified as a key determinant of socio-sexual network structure.
- We aim to describe patterns of homophily within the networks of gay and bisexual men.

Methods

- Sexually-active men, aged 16+, were recruited between February 2012 and February 2015 using respondent-driven sampling (RDS).
- Participants recruited up to six participants in their social or sexual networks. They were instructed not to recruit people not in their network.
- Homophily estimates, based on RDS recruitment patterns, were calculated in RDSAT and ranged from -1.00 (completely heterophilous) to +1.00 (completely homophilous).
- Homophily (H) was defined was classified as high (+/-0.50 or more), moderate (+/-0.30 to 0.50) or Low (+/-0.30 or less) based on previous studies.

Results

- A total of 119 seeds were used to recruit 665 gay and bisexual men.
  - 63.6% were HIV-negative, 28.4% were HIV-positive, 8% were unknown
  - 97.9% were cisgender
  - 37.3% were younger than 30
  - 75.6% were White, 6.5% were Indigenous, 10.2 were Asian, and 7.8% were another ethnicity
  - 49.4% lived downtown, 31.0% lived in Vancouver area, 19.6% lived outside Vancouver
  - 19.9% used Meth, 19% used GHB, 4.4% used LSD, 9.6% used crack
  - 76.9% graduated high school
  - 54.0% went to gay bars about monthly or more
  - 40.3% used online sex seeking apps about monthly or more
  - 10.3% perceived themselves to be at high risk for HIV.
  - 59.9% had ever been diagnosed with an STI.
  - 12.8% did not have anal sex in the past 6 months, 22.6% used condoms every time they had anal sex, 26.1% had condomless anal sex with only same-status partners, 38.5% had anal sex with an unknown status or serodiscordant partner.
- High homophily was observed among HIV-positive men, cis and trans men, by age (See Figure 1 below).

Discussion

- **Primary Findings.** Age, gender and HIV status were the only variables with homophily estimates above 0.50 – suggesting that serostatus and demographic factors have the strongest effect on social sexual network composition.
- **Primary Findings.** Factors often considered most proximally related to HIV generally had smaller effect on sociosexual network composition – suggesting these behaviours are diffuse throughout gay and bi social networks.
- **Primary Findings.** These findings suggest that social stigma (HIV stigma, age-related stigma) and other drivers of homophily likely have an impact on social network structure and thus may be important to understanding the transmission of STBBI.
- **Limitations.** RDS recruitment chains are not a perfect measure for homophily because we cannot distinguish between homophily and preferential recruitment biases.
- **Next Steps.** To understand the effect of homophily on the transmission of sexual transmitted and blood borne infections, more information about sexual network density and network size is needed.
  - Restricting recruitment to sexual partners would allow for an RDS study to capture sexual network dynamics.
  - Collecting information about the number of partners who've had sex with each other would allow for studies examining network density.

