

# Sexual Event-Level Analysis of Age-Disparate Partners Among Gay, Bisexual and other men who have sex with men (GBM) in Vancouver

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## Background

- Gay, bisexual, and other men who have sex with men (GBM) represent a priority demographic within the HIV epidemic globally, and in Canada<sup>1</sup>
- Despite persistently higher prevalence of HIV in older GBM's, a critical gap remains in understanding the sexual health implications of participating in intergenerational relationships
- We sought to identify the prevalence of age-disparate partnering among GBM and the demographic, behavioural and individual/event-level factors associated with self-reported older or younger partners.

## Methods

**Study Design and Participants:** Baseline cross-sectional data from the Momentum Health study, a longitudinal prospective-cohort study of HIV-positive and negative GBM living in metro-Vancouver, Canada, was used to assess socio-demographic, psychosocial (e.g., McKirnan et al. 2001's Escape Motives, study  $\alpha=0.90$ ),<sup>2</sup> and relational sexual behavioral and substance use factors associated with event-level age-disparate partnerships.

**Outcomes:** In order to determine factors associated with relative age-different among participants we asked men to report "What is the approximate age of this sex partner compared with your age?" for their 5 most recent sexual encounters. Available responses included: "younger", "much younger", "older", "much older" or "same age".

**Statistical Analysis:** A generalized linear mixed model for multivariable logistic regression was used to identify factors associated with event-level sex with younger and much younger versus same aged and older or much older versus same aged partners. Interaction tests were conducted and modeled for the effects of Age on HIV status.

## Results

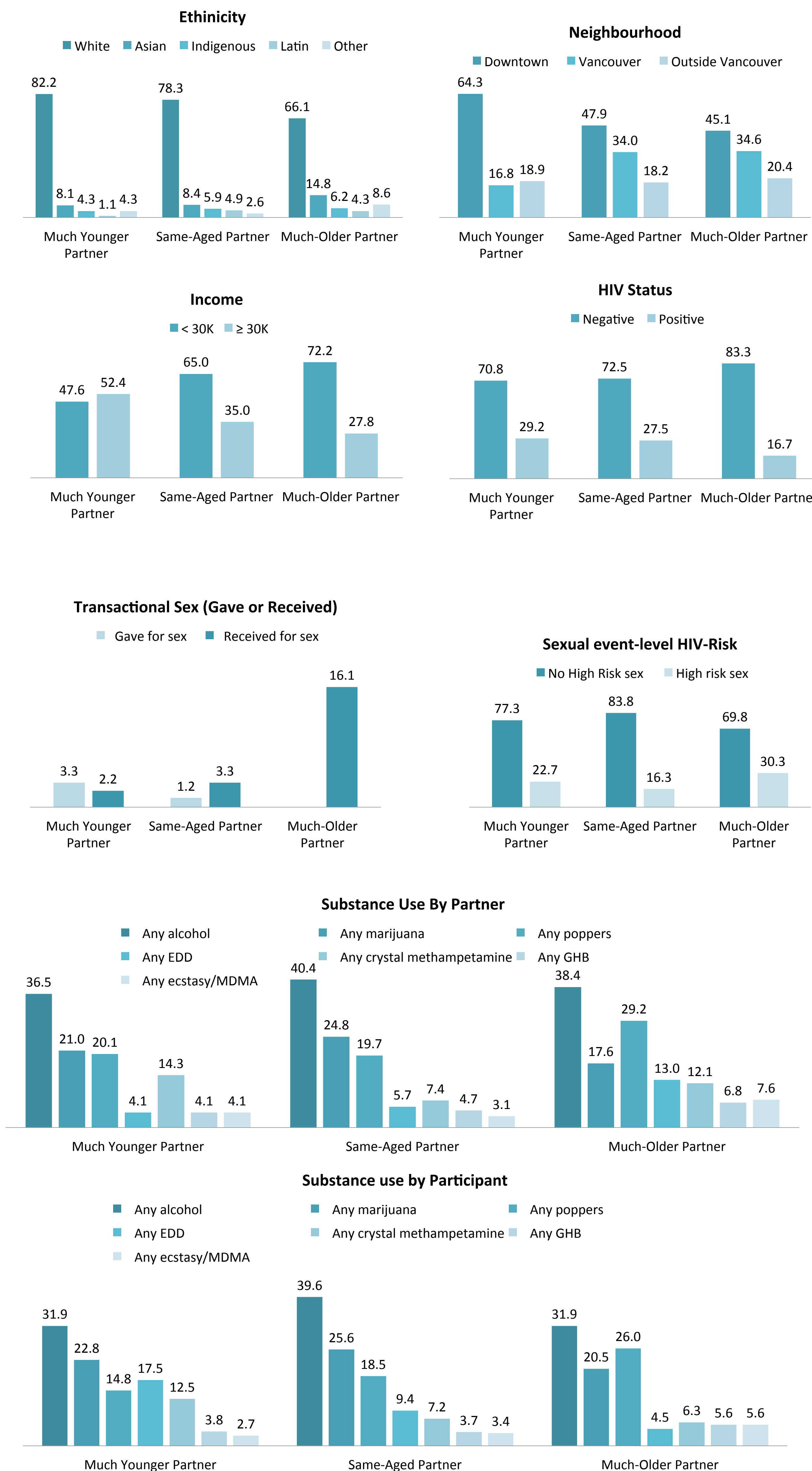
**Table 1- Sample descriptive statistics of demographics at the individual level**

	Individuals (n=719)		Events (n=2513)	
	n	%	n	%
<b>Age: median (Q1, Q3)</b>	33	(26, 47)	32	(25, 46)
<b>Sexual Identity</b>				
Gay	612	85.1	2185	87.0
Bisexual	66	9.2	194	7.7
Other	41	5.7	134	5.3
<b>Race/Ethnicity</b>				
White	539	75.0	1899	75.6
Asian	72	10.0	264	10.5
Aboriginal	50	7.0	133	5.3
Latin	31	4.3	93	3.7
Other	27	3.8	124	4.9
<b>Education</b>				
Completed high school or less	158	22.4	480	19.5
More than highschool	547	77.6	1988	80.6
<b>Annual Income</b>				
<30K	457	63.6	1530	60.9
≥30K	262	26.4	983	39.1
<b>Tested for HIV, past 2 years</b>				
No	89	12.4	278	11.1
Yes	435	60.5	1587	63.2
Self-reported HIV-positive	195	27.1	648	25.8
<b>HIV status, self-reported</b>				
Negative	520	72.3	1677	66.7
Positive	199	27.7	648	25.8

- Overall, 719 men reported 2513 sexual events with their last 5 partners. Average age of participants was 33 (Q1, Q3= 26,47).
- Participants identifying primarily as gay (85.1%), white (75.0%), testing for HIV in the past 2 years (60.5%), and being HIV-negative (65.0%).

## Results Cont'd

The majority (66.7%) of reported sexual encounters were with age-disparate partners (either, younger, much-younger, older or much-older). Within these encounters only 7.4% and 6.4% were between those much-younger and much-older respectively.



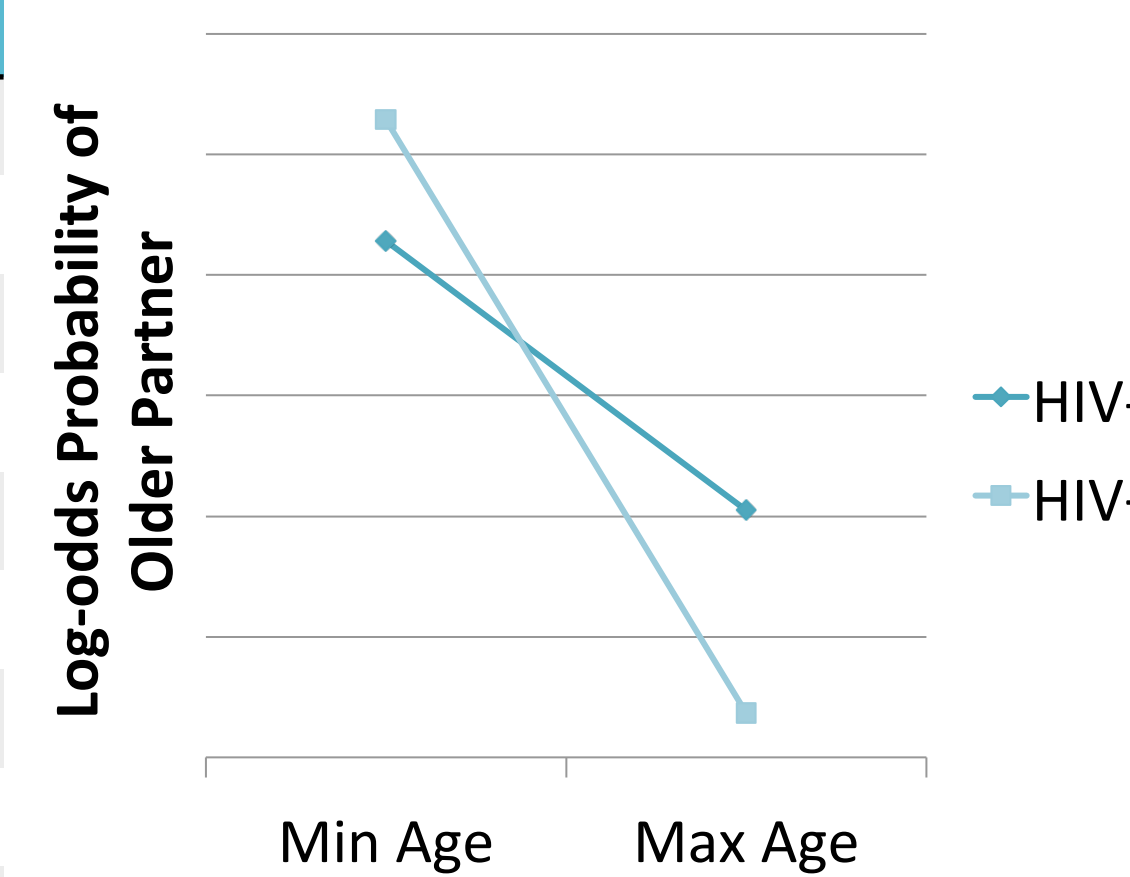
**Figure 1. Descriptive statistics, HIV status, sexual behaviour and substance use of reported sexual events of same aged, much younger and much older partners within the Momentum men's health study**

- 22.7% of events with much younger partners considered high-risk (e.g. condomless anal sex with partner of unknown or sero-discordant HIV status) versus 16.3% of events with same-aged partners and 30.3% of much-older partners.
- Our results present discrepancies surrounding the reporting of HIV risk-behavior (e.g. partner status disclosure and condom use during anal intercourse), and transactional sexual exchanges.

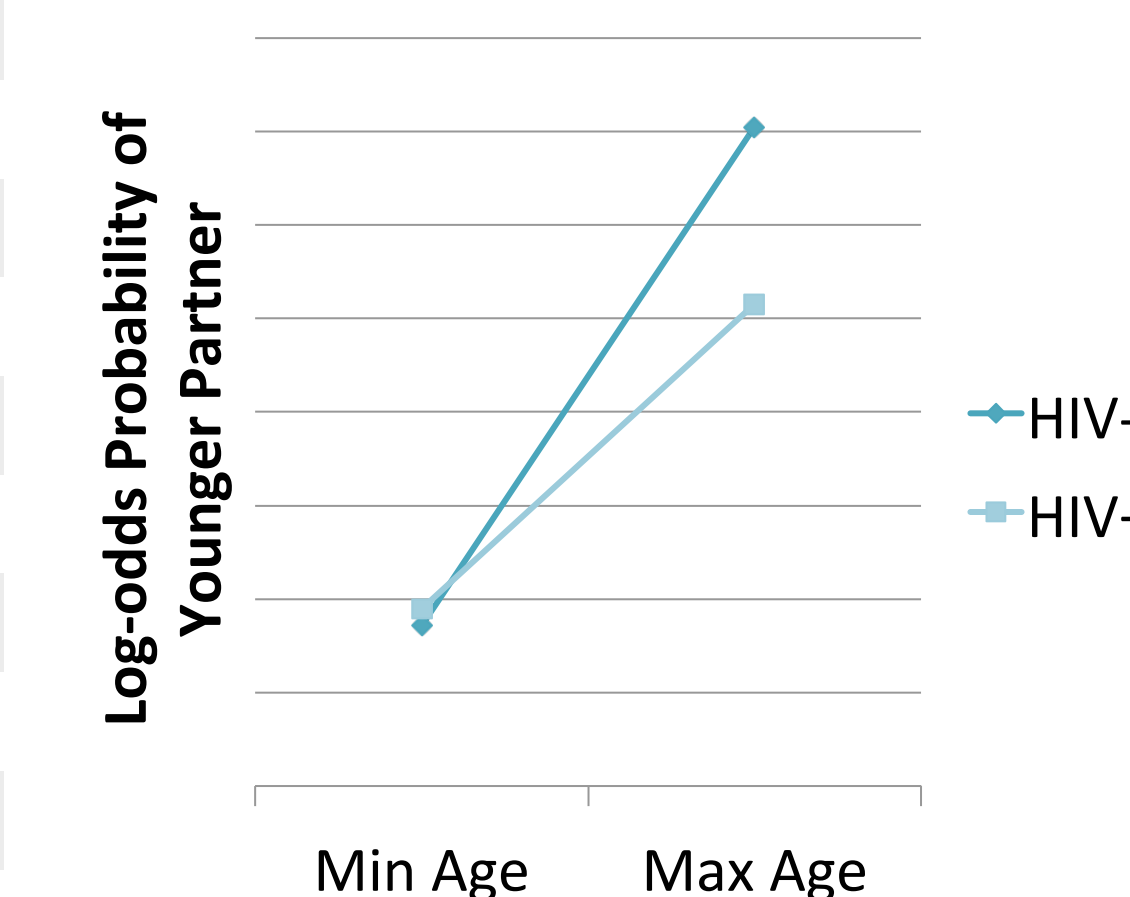
## Results Cont'd

**Table 2. Multivariable ordinal associations with older partners**

	AOR (95%CI)
<b>Sexual Identity</b>	
Gay (ref)	1.00
Bisexual	<b>0.37 (0.21-0.65)</b>
Other	1.56 (0.90-2.71)
<b>Race/Ethnicity</b>	
White (ref)	1.00
Asian	<b>2.01 (1.31-3.08)</b>
Aboriginal	1.49 (0.84-2.62)
Latin	1.09 (0.58-2.05)
Other	<b>2.48 (1.19-5.16)</b>
<b>Escape Motives Scale</b>	<b>1.02 (1.00-1.05)</b>
<b>Transactional Sex</b>	
Gave for sex (ref: no)	<b>0.25 (0.07-0.89)</b>
Received for sex (ref: no)	<b>4.18 (2.48-7.03)</b>
<b>Participant Substance Use</b>	
Any alcohol (ref: none)	<b>0.68 (0.53-0.88)</b>
Any EDD (ref: none)	<b>0.46 (0.26-0.83)</b>
<b>Partner Substance Use</b>	
Any EDD (ref: none)	<b>4.64 (2.49-8.64)</b>
<b>Risky Sex</b>	
Low risk sex (ref)	1.00
High risk sex	<b>1.38 (1.02-1.87)</b>
<b>HIV Status x Age (Fig 2 &amp; 3)</b>	
Age in years x HIV-	<b>0.96 (0.94-0.98)</b>
Age in years x HIV+	<b>0.92 (0.89-0.95)</b>



**Figure 2. HIV status and age interaction for sex with older partners**



**Figure 3. HIV status and age interaction for sex with younger partners**

- Items positively associated with having older partners included being Asian versus White, increased cognitive escape scores, reporting partner using EDD, and receiving money, goods, or drugs for sex. Sexual encounters with older partners were negatively associated with being bisexual, event-level EDD use, and being HIV positive (See table 2).
- Men with younger partners were independently less likely to meet in a sexualized space compared with online (aOR=0.65, 95%CI=0.46-0.92), and more likely to make more than \$30,000CAN/year (AOR=1.75, 95%CI=1.25-2.47).
- An interaction effect for age on HIV status and found younger HIV-positive GBM were more likely to be with older partners than younger HIV-negative GBM (figure 2, above) while older HIV-negative GBM were more likely to be with younger partners than older HIV-positive GBM (AOR=1.06, 95%CI: 1.03-1.10) (figure 3, above).

## Conclusions

- Younger HIV-positive and Asian GBM were more likely to report having older partners.
- Consistent with the literature, participants reporting older partners were more likely to engage in high-risk sexual behaviors, compared with similarly aged partnerships.<sup>3</sup>
- Discrepancies reported in sexual HIV-risk and transactional sex among age-disparate partners highlight important targets for health promotion and future research.

## References

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