

# Understanding anxiety during sex among women with HIV in Canada: A cross-sectional analysis of social, psychological, and relational factors

Allison Carter<sup>1, 2</sup>, Saara Greene<sup>3</sup>, Deborah Money<sup>4</sup>, Margarite Sanchez<sup>2</sup>, Kath Webster<sup>2</sup>, Valerie Nicholson<sup>2</sup>, Lori A. Brotto<sup>4</sup>, Catherine Hankins<sup>5, 6</sup>, Mary Kestler<sup>10</sup>, Neora Pick<sup>4, 7</sup>, Kate Salters<sup>1, 2</sup>, Karène Proulx-Boucher<sup>8</sup>, Nadia O'Brien<sup>8</sup>, Sophie Patterson<sup>2</sup>, Alexandra de Pokomandy<sup>8, 9</sup>, Mona Loufy<sup>11</sup>, Angela Kaida<sup>2</sup>, CHIWOS

1. British Columbia Centre for Excellence in HIV/AIDS, Vancouver, BC,
2. Simon Fraser University, Faculty of Health Sciences, Vancouver, BC,
3. McMaster University, School of Social Work, Hamilton, ON,
4. University of British Columbia, Department of Obstetrics and Gynecology, Faculty of Medicine, Vancouver, BC,
5. Amsterdam Institute for Global Health and Development, University of Amsterdam, Amsterdam, Netherlands,
6. McGill University, Department of Epidemiology, Faculty of Medicine, Montreal, QC,

7. Oak Tree Clinic, British Columbia Women's Hospital and Health Centre, Vancouver, BC,
8. Chronic Viral Illness Service, McGill University Health Centre, Montreal, QC,
9. McGill University, Department of Family Medicine, Montreal, QC,
10. University of British Columbia, Division of Infectious Diseases, Faculty of Medicine, Vancouver, BC,
11. Women's College Research Institute, Women's College Hospital, Toronto, ON

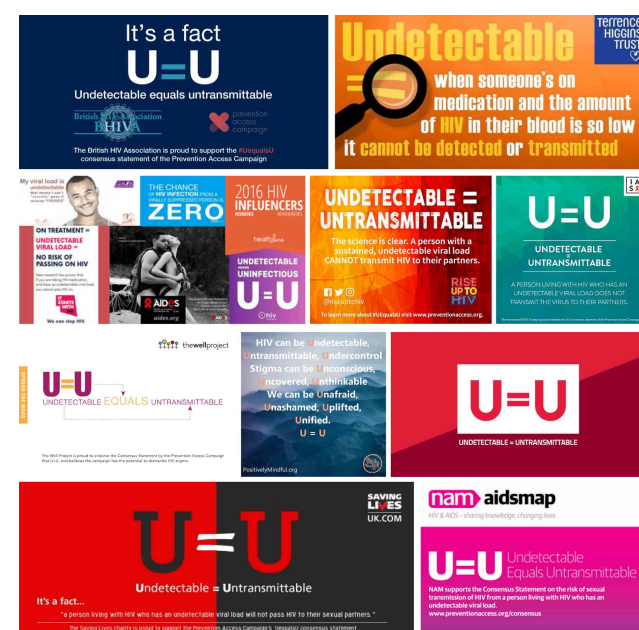
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## BACKGROUND

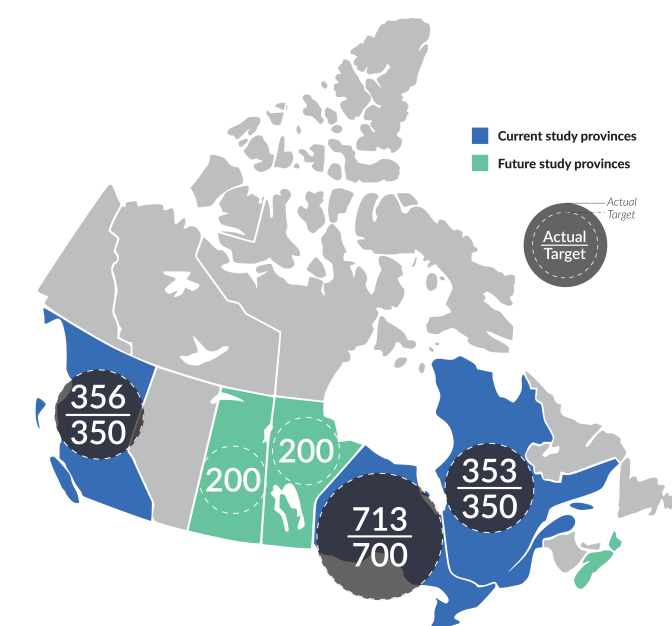
Sustained use of antiretroviral therapy (ART) with an undetectable viral load (VL) effectively eliminates the risk of sexual HIV transmission, and communities are using this science to **reclaim their sexual lives**. While awareness of the science of HIV transmission may reduce anxiety during sex, trauma and power inequity remain prevalent forces in the lives of women with HIV.



**Objective:** To identify the factors predicting sexual anxiety among women living with HIV in Canada.

## METHODOLOGY

We used baseline questionnaire data from the Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS, [www.chiwos.ca](http://www.chiwos.ca)). We hired and trained 40 women living with HIV as Peer Research Associates across BC, ON and QC and together, we recruited and surveyed a diverse cohort of 1,422 women living with HIV aged 16 years or older.



- **Data collection:** August 2013 to May 2015
- **Primary outcome:** Women who reported sex in the past month were asked, "Overall, how frequently have you become anxious or inhibited during sexual activity (i.e., oral, anal, vaginal) with a partner?"

- **Explanatory variables:** Social (e.g., sexism), emotional (e.g., depression), and relational (e.g., power equity), as well as awareness of ART prevention benefits. This was measured via the question, "How do you think taking ART changes your risk of transmitting HIV?" and defined as "makes the risk a lot lower."

- **Statistical analysis:** Descriptive and bivariable analyses. Multinomial logistic regression (backwards selection, minimizing AIC and maintaining Type III P-values <0.2).

## RESULTS

**Table 1:** Baseline characteristics and bivariable associations with sexual anxiety (n=474)

	Frequency of becoming anxious or inhibited during sex in past month					
	Overall	Always/Usually (N=69, 14.6%)	Sometimes/Seldom (N=127, 26.8%)	Not at all (N=278, 58.6%)	p-value	
<b>Continuous variables, Median (Q1, Q3)</b>						
Age at interview	39 (32.0-45.0)	40 (34.0-47.0)	39 (33.0-45.0)	39 (32.0-45.0)	0.577	
Years living with HIV	9.6 (5.6-15.5)	8.2 (3.8-14.8)	9.2 (5.6-16.4)	10.2 (5.7-15.2)	0.388	
Genderism/sexism	17 (10.0-27.0)	22.5 (14.5-28.5)	22 (12.0-30.0)	16 (8.0-24.0)	<0.001	
Racism	16 (8.0-28.0)	21 (8.0-32.0)	15.5 (8.0-27.0)	15 (8.0-27.0)	0.232	
HIV stigma	55 (40.0-70.0)	60 (46.3-80.0)	57.5 (45.0-67.5)	52.5 (40.0-67.5)	0.01	
Depression	8 (3.0-14.0)	13 (8.0-20.0)	10 (5.0-15.0)	5 (2.0-11.0)	<0.001	
Sexual relationship power	48 (43.0-56.0)	45 (39.0-51.0)	45 (41.0-51.0)	52 (45.0-58.0)	<0.001	
<b>Categorical variables, N (%)</b>						
<b>Aware of ART prevention benefits</b> 0.508						
Yes	343 (72.4)	46 (66.7)	94 (74.0)	203 (73.0)	0.508	
No	131 (27.6)	23 (33.3)	33 (26.0)	75 (27.0)		
<b>Sexual orientation</b> 0.260						
Heterosexual	405 (85.8)	54 (79.4)	110 (87.3)	241 (86.7)		
Lesbian/queer	67 (14.2)	14 (20.6)	16 (12.7)	37 (13.3)		
<b>Ethnicity</b> 0.505						
Indigenous	116 (24.5)	15 (21.7)	30 (23.6)	71 (25.5)		
African/Caribbean/Black	128 (27.0)	25 (36.2)	29 (22.8)	74 (26.6)		
White	197 (41.6)	24 (34.8)	57 (44.9)	116 (41.7)		
Other/multiple ethn.	33 (7.0)	5 (7.2)	11 (8.7)	17 (6.1)		

**Table 1 (continued):** Baseline characteristics and bivariable associations with sexual anxiety (n=474)

	Frequency of becoming anxious or inhibited during sex in past month					
	Overall	Always/Usually (N=69, 14.6%)	Sometimes/Seldom (N=127, 26.8%)	Not at all (N=278, 58.6%)	p-value	
<b>Additional categorical variables - N (%)</b>						
<b>Gender identity</b> 0.021						
Cis woman	447 (94.3)	62 (89.9)	116 (91.3)	269 (96.8)		
Trans woman	27 (5.7)	7 (10.1)	11 (8.7)	9 (3.2)		
<b>Personal yearly income</b> 0.009						
Less than \$20000	318 (69.3)	54 (85.7)	80 (65.0)	184 (67.4)		
\$20000 or more	141 (30.7)	9 (14.3)	43 (35.0)	89 (32.6)		
<b>Any violence as adult</b> <0.001						
Never	67 (14.8)	9 (13.6)	8 (6.6)	50 (18.7)		
Previously	264 (58.1)	30 (45.5)	73 (60.3)	161 (60.3)		
Currently	123 (27.1)	27 (40.9)	40 (33.1)	56 (21.0)		
<b>Current sex work</b> <0.001						
No	408 (87.7)	49 (73.1)	108 (85.7)	251 (92.3)		
Yes	57 (12.3)	18 (26.9)	18 (14.3)	21 (7.7)		
<b>Illicit drug use history</b> 0.033						
Never	217 (46.3)	28 (41.2)	46 (36.5)	143 (52.0)		
Previously	134 (28.6)	19 (27.9)	46 (36.5)	69 (25.1)		
Currently	118 (25.2)	21 (30.9)	34 (27.0)	63 (22.9)		
<b>ART</b> 0.091						
Never	59 (12.5)	3 (4.3)	13 (10.2)	43 (15.6)		
Previously	29 (6.2)	5 (7.2)	6 (4.7)	18 (6.5)		
Currently	383 (81.3)	61 (88.4)	108 (85.0)	214 (77.8)		
<b>Most recent viral load</b> 0.033						
Undetectable	368 (77.6)	62 (89.9)	99 (78.0)	207 (74.5)		
Detectable	68 (14.3)	4 (5.8)	16 (12.6)	48 (17.3)		
<b>Emotional closeness in sex life</b> <0.001						
Enough	256 (54.4)	16 (23.2)	59 (46.8)	181 (65.6)		
Not enough	215 (45.6)	53 (76.8)	67 (53.2)	95 (34.4)		
<b>Communication of sexual desires or preferences</b> <0.001						
Always/Usually	336 (73.4)	37 (56.9)	70 (57.4)	229 (84.5)		
Sometimes/Seldom/ Never	122 (26.6)	28 (43.1)	52 (42.6)	42 (15.5)		
<b>Body satisfaction</b> 0.043						
Satisfied	318 (67.1)	43 (62.3)	76 (59.8)	199 (71.6)		
Dissatisfied	156 (32.9)	26 (37.7)	51 (40.2)	79 (28.4)		

**Table 2:** Multivariable model of factors associated with sexual anxiety using "not at all" as the reference (n=370)

	Sexual anxiety, AORs (95% CI)	
	Always/Usually	Sometimes/Seldom
Not aware of the HIV prevention benefits of ART	1.03 (0.47, 2.27)	0.87 (0.48, 1.60)
Depression (1-point increase, CES-D scale)	<b>1.09 (1.04, 1.15)</b>	<b>1.04 (1.00, 1.09)</b>
Sexism (1-point increase, EED scale)	1.02 (0.99, 1.06)	<b>1.03 (1.01, 1.06)</b>
Current sex work	<b>6.84 (1.62, 28.92)</b>	1.43 (0.45, 4.54)
Current illicit drug use (vs. never)	0.30 (0.08, 1.06)	0.80 (0.35, 1.84)
Previous illicit drug use (vs. never)	1.23 (0.55, 2.77)	<b>2.55 (1.41, 4.59)</b>
Detectable viral load	<b>0.28 (0.08, 0.94)</b>	0.60 (0.27, 1.32)
Adequate emotional closeness from partner	<b>0.36 (0.16, 0.80)</b>	0.92 (0.51, 1.63)
Sexual Relationship Power (1-point increase, SRPS)	<b>0.94 (0.90, 0.99)</b>	<b>0.92 (0.88, 0.96)</b>

## DISCUSSION

- Awareness of ART prevention benefits was not correlated with lower anxiety during sex. However, data precedes the PARTNER study.
- Drivers of sexual anxiety were depression, sexism, and sex work, whereas higher closeness and relationship equity were protective.
- Current drug use showed reduced odds of reporting anxiety, perhaps because drugs may numb sexual feelings.
- In post-hoc analyses stratified by income, the OR for detectable VL was below 1 those reporting <\$20K; but above 1 and not significant for those reporting >\$20K.

This study should be repeated today, in light of new research on the science of transmission and the #UequalsU social movement. Nevertheless, results highlight a need to gender the HIV "treatment as prevention" paradigm. TasP is important but not enough. **Promoting positive sexual health outcomes requires addressing the gendered social and relational barriers women face in having and enjoying sex.**

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**For more information:**  
Email [allison\\_carter@sfu.ca](mailto:allison_carter@sfu.ca)  
Twitter/Instagram @DrAllieCarter