

Factors Associated with HIV-related Stigma Among Individuals Accessing Antiretroviral Therapy in British Columbia, Canada

A. Bever¹, S. Grieve¹, L. Wang¹, W. Chau¹, T. McLinden¹, T. Wesseling¹, K. Salters¹, B. Bingham², D. Moore¹, R. Barrios¹

1. BC Centre for Excellence in HIV/AIDS, Vancouver, Canada; 2. Vancouver Coastal Health, Aboriginal Health, Vancouver Canada

Background

- Negative consequences of HIV-related stigma include reduced quality of life, isolation and psychological distress, barriers to utilizing health services, and poorer adherence to HIV medication¹⁻⁴.
- Many people living with HIV (PLWH) continue to experience stigma despite public health messaging that antiretroviral therapy (ART) has improved health outcomes and is effective in preventing transmission.
- It is critical to assess HIV-related stigma experienced by PLWH accessing ART in the modern HIV treatment era.

Methods

- We used baseline survey data from the STOP HIV/AIDS Program Evaluation (SHAPE) study.

What is SHAPE?

- A longitudinal cohort of PLWH aged 19 years or older residing in British Columbia, Canada.
- N=644 participants were enrolled and completed a baseline survey from January 2016 – September 2018.
- Participation involves 3 surveys, 18 months apart, about HIV care experiences with clinical follow-up ongoing.
- Purposive sampling was used to build a cohort inclusive of key sociodemographic, behavioural and clinical characteristics.

- This cross-sectional analysis examined factors associated with perceived HIV-related stigma among SHAPE participants who have accessed ART.
- HIV-related stigma was self-reported using the **10-item Berger HIV Stigma Scale**⁵; scores reparameterized to range from 0-100.

What is perceived stigma?

“Awareness of HIV-related actual or potential social disqualification (less than full social acceptance, social rejection), denial or limitation of opportunity (e.g. in housing, jobs or dental services), and negative change in social identity (how other see him/her).” –Berger, 2001

- Explanatory variables included sociodemographic and behavioural characteristics hypothesized to impact experiences of stigma.
- Multivariable linear regression quantified the relationship between explanatory variables and HIV-related stigma; Type III p-values and Akaike information criterion selected explanatory variables in the final multivariable model.

Results

- Of 644 SHAPE participants, 627 accessed ART on or before the date of their baseline survey and were included in the analysis (**Table 1**).
- Median stigma score was 47.5 (Q1-Q3: 32.5-62.5).
- In multivariable analyses, reporting injection drug use (IDU) in the past year or selecting “prefer not to answer” when asked about IDU history; experiences of lifetime violence; having and mental health disorder diagnosis; and being 40-49 years old were associated with higher stigma scores (**Table 2**).

Results (continued)

- Living a city with a population $\geq 100,000$ was associated with lower stigma scores (**Table 2**).

Table 1: Participant characteristics with corresponding distribution of HIV-related stigma scores at enrolment in SHAPE (n= 627)

Variables	Frequency N(%)	Stigma score Median (Q1-Q3)	P-value
Gender			0.386
Male	363 (77%)	47.5 (32.5 – 60.0)	
Female	136 (22%)	50.0 (35.0 – 65.0)	
Other	11 (2%)	37.5 (27.5 – 57.5)	
Indigenous ethnicity ¹			0.124
Yes	133 (21%)	50.0 (35.0 – 65.0)	
No	494 (79%)	47.5 (32.5 – 60.0)	
Men who have sex with men			0.040
Yes	374 (60%)	45.0 (30.0 – 60.0)	
No	253 (40%)	50.0 (35.0 – 62.5)	
History of homelessness			0.046
Never	317 (51%)	45.0 (30.0 – 60.0)	
Currently or in the last year	89 (14%)	55.0 (40.0 – 62.5)	
Yes, but not in the last year	221 (35%)	47.5 (32.5 – 65.0)	
Age at interview			<0.001
<40	122 (19%)	47.5 (30.0 – 65.0)	
40-49	179 (29%)	52.5 (40.0 – 67.5)	
≥ 50	326 (52%)	45.0 (30.0 – 57.5)	
City size			0.011
Population <100,000	133 (21%)	52.5 (37.5 – 65.0)	
Population $\geq 100,000$	494 (79%)	45.0 (30.0 – 60.0)	
Mental illness diagnosis (ever)			<0.001
Yes	424 (68%)	50.0 (33.8 – 65.0)	
No	203 (32%)	45.0 (30.0 – 52.5)	
Inject drug use history			0.001
Never	268 (43%)	43.8 (30.0 – 60.0)	
Yes, but not in the last year	138 (22%)	47.5 (32.5 – 57.5)	
Yes, in the last year	126 (20%)	53.8 (35.0 – 65.0)	
Prefer not to answer	95 (15%)	52.5 (40.0 – 70.0)	
Experience of violence (ever)			<0.001
Yes	472 (75%)	42.5 (27.5 – 55.0)	
No	144 (23%)	50.0 (35.0 – 65.0)	
Prefer not to answer	11 (2%)	45.0 (15.0 – 50.0)	

¹The term ‘Indigenous’ is used here to describe participants who self-identified as Indigenous in the baseline survey instrument. ‘Indigenous’ is used to collectively describe the Indigenous peoples of Canada, inclusive of those who identify as ‘Aboriginal’ or First Nations, Métis and Inuit. This term is used while acknowledging the diversity of cultures, languages and traditions that exist among Indigenous Canadians.

Table 2: Multivariable linear regression quantifying associations between explanatory variables and HIV-related stigma among SHAPE participants

Variables	Adjusted coefficient (β) [95% confidence interval (CI)]
Age at interview	Referent
<40	6.21 (1.58, 10.85)
40-49	-1.67 (-5.89, 2.55)
≥ 50	
Lives in city with population $\geq 100,000$	-4.66 (-8.53, -0.78)
Mental illness diagnosis (ever)	5.30 (1.88, 8.73)
Inject drug use history	Referent
Never	
Yes, but not in the last year	1.23 (-5.42, 2.95)
Yes, in the last year	4.54 (0.23, 8.86)
Prefer not to answer	9.52 (4.77, 14.28)
Experience of violence (ever)	7.62 (3.67, 11.56)
Prefer not to answer	-8.78 (-21.16, 3.61)

Conclusion

- Age, city size, IDU experience, violence and mental illness were independently associated with HIV-related stigma.
- These findings provide support for an intersectional investigation into how these factors propagate HIV-related stigma, which considers the potential for compounded effects among individuals who experience multiple sources of stigmatization and/or marginalization.
- Future research should seek to identify and evaluate targeted interventions that combat HIV-related stigma with the aim of promoting health and wellbeing of PLWH in this setting.