

The 29th Annual Canadian Conference on HIV/AIDS Research Le 29e Congrès annuel canadien de recherche sur le VIH/sida

Session: **CS4**: Sunday May 3 – 11:00:12:30 – Co-morbidities and Adherence

Track: Clinical Sciences

Subject: Adherence

Presentation Type: Oral

Title of Abstract: **Syndemic Effects of Childhood Adverse Experiences, Depression, and Substance Use on Antiretroviral Non-adherence among Participants of the OHTN Cohort Study**

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Abstract

Background: Previous research has linked childhood adverse experiences (ACEs), substance use, and depression with poor antiretroviral (ARV) adherence. In the current study, we investigated the syndemic effects of these three factors on ARV non-adherence among participants of the OHTN Cohort Study (OCS).

Methods: Sample included OCS participants on ARV treatment. ARV non-adherence was assessed using a single question “Have you missed any of your doses of ARV over the past 4 days?”. We used the ACE-10 scale to assess ACEs and the PHQ-9 scale to measure depressive symptoms. Substance use was assessed using single question “In the past 6 months, have you used any substances for non-medicinal reasons?” We created syndemic factors (SFs) count (range: 0-3) by adding presence of ≥ 3 ACEs (Yes vs. No), current depression (Yes vs. No), and substance use (Yes vs. No). We used logistic regression modeling to examine the association between number of SFs and ARV non-adherence.

Results: Participants (N=2026) were middle-aged (median age: 52 years) men (82%) and identified as gay/bisexual/lesbian (67%), and white (65%). Most had post-secondary education (70%), annual income < \$40,000 (61%), and drug insurance coverage for ARVs (56%).

Over one-third (38%) had ≥ 3 ACEs, 14% had significant depression, 17% used substances, and 9% reported ARV non-adherence. ARV non-adherence increased with greater number of syndemic factors (No SF: 6.0%; 1 SF: 6.8%; 2 SFs: 8.2%; 3 SFs: 12.3%; linear trend test, $p < 0.001$). In multivariable regression model, having two or more SFs remained associated with higher odds of ARV non-adherence (2 SFs: aOR= 2.42, 95% CI: 1.65-3.54, $p < 0.001$; 3 SF: aOR=3.66, 95% CI: 2.15-6.23, $p < 0.001$) after adjusting for other potential confounders.

Conclusions: Our results suggest additive effects of ACEs, depression, and substance use on ARV non-adherence. Integrating mental health and substance use interventions into HIV care may help improve HIV treatment outcomes.