

Resilient Coping and Social Support moderate the negative impacts of Adverse Childhood Experiences on Depressive symptoms among people with HIV: Findings from the OHTN Cohort Study

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Conflicts of Interest

In the past 2 years I have been an employee of: **Ontario HIV Treatment Network**

In the past 2 years I have been a consultant for: **NONE**

In the past 2 years I have held investments in the following pharmaceutical organizations, medical devices companies or communications firms: **NONE**

In the past 2 years I have been a member of the Scientific advisory board for: **NONE**

In the past 2 years I have been a speaker for: **NONE**

In the past 2 years I have received research support (grants) from: **NONE**

In the past 2 years I have received honoraria from: **NONE**

I agree to disclose approved and non-approved indications for medications in this presentation: **YES**

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There are relationships to disclose: **NO**





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Background

- People living with HIV have higher prevalence of Adverse Childhood Experiences (ACEs) than the general Canadian population. (Bekele et al, 2018)
- Exposure to ACEs, in turn, have been linked with adverse health outcomes in adults including poor mental health, functional limitations, binge and heavy drinking, cigarette smoking, obesity, diabetes, and cardiovascular diseases. (Monnat et al, 2015; Campbell et al, 2016; Thurston et al, 2023;)
- Interventions that mitigate the negative effects of ACEs will ultimately improve the health of people living with HIV.
- We investigated whether two psychological resources, i.e., Resilient coping and social support, buffer the adverse effects of ACEs on depressive symptoms.





Methods

Measures

- **ACE-10 scale:** Childhood Adverse Experiences (ACEs) were assessed using the ACE-10 scale (Felitti et al, 1998). This tool asks exposure (1=Yes; 0=No) to 10 adverse experiences in the first 18 years of one's life including abuse (physical, emotional, and sexual), neglect (physical and emotional), household dysfunction (divorce, substance abuse, violence), mental illness, and incarceration.
- **Patient Health Questionnaire (PHQ-9):** Depressive symptoms were assessed using the 9-item PHQ-9 survey (Kroenke et al, 2001). This tool assesses presence and severity (ranging from 0="not at all" to 3= "nearly every day") of depressive symptoms over the past 2 weeks.
- **Medical Outcomes Study Social Support (MOS-SS):** We used the MOS-SS 8-item scale (Moser et al, 2012) to assess perceived availability of four types of social support, i.e., emotional and informational, tangible, affectionate, and positive social interaction.
- **Brief Resilient Coping Scale (BRCS):** Resilient coping was assessed with a 3-item BRCS scale (Sinclair & Wallston, 2004) that asks participants ability to mentally or emotionally cope with a crisis or to return to pre-crisis status quickly.





Methods

- Data for the current analyses come from OCS participants who completed the annual OCS questionnaire in 2021 and 2022.
- OCS is a community-governed longitudinal cohort of PLWH receiving care in 15 clinics across Ontario.
- Sociodemographic and psychosocial data are collected using an annual questionnaire while clinical data are extracted from medical charts.
- Linear regression modelling method was used to examine the moderating/buffering role of resilient coping and social support on the relationship between ACEs and depressive symptoms.





Sample characteristics (N=2,256)

Age in years

20-29	85 (3.3%)
30-39	337 (13.2%)
40-49	491 (19.2%)
50-59	780 (30.5%)
60-69	649 (25.4%)
70+	214 (8.4%)

Education

Less than high school completion	267 (10.6%)
Completed high school	368 (14.4%)
Trade/Tech/some college	289 (11.3%)
Completed college/Some Univ.	742 (29.0%)
Completed University	875 (34.2%)
Unknown	16 (0.6%)

Gender/Sexual Orientation

Woman/Transwoman	526 (20.6%)
Men-Heterosexual	345 (13.5%)
Men-Gay or Bisexual	1657 (64.8%)
Non-binary/Other	28 (1.1%)

Race/Ethnicity

Arab/West Asian	32 (1.3%)
Black	499 (19.5%)
East/South East Asian	98 (3.8%)
Indigenous	143 (5.6%)
Latinx	115 (4.5%)
South Asian	73 (2.9%)
White	1514 (59.2%)
Multi-race	64 (2.5%)
Other/Unknown	18 (0.7%)





Prevalence of ACEs (N=2,556)

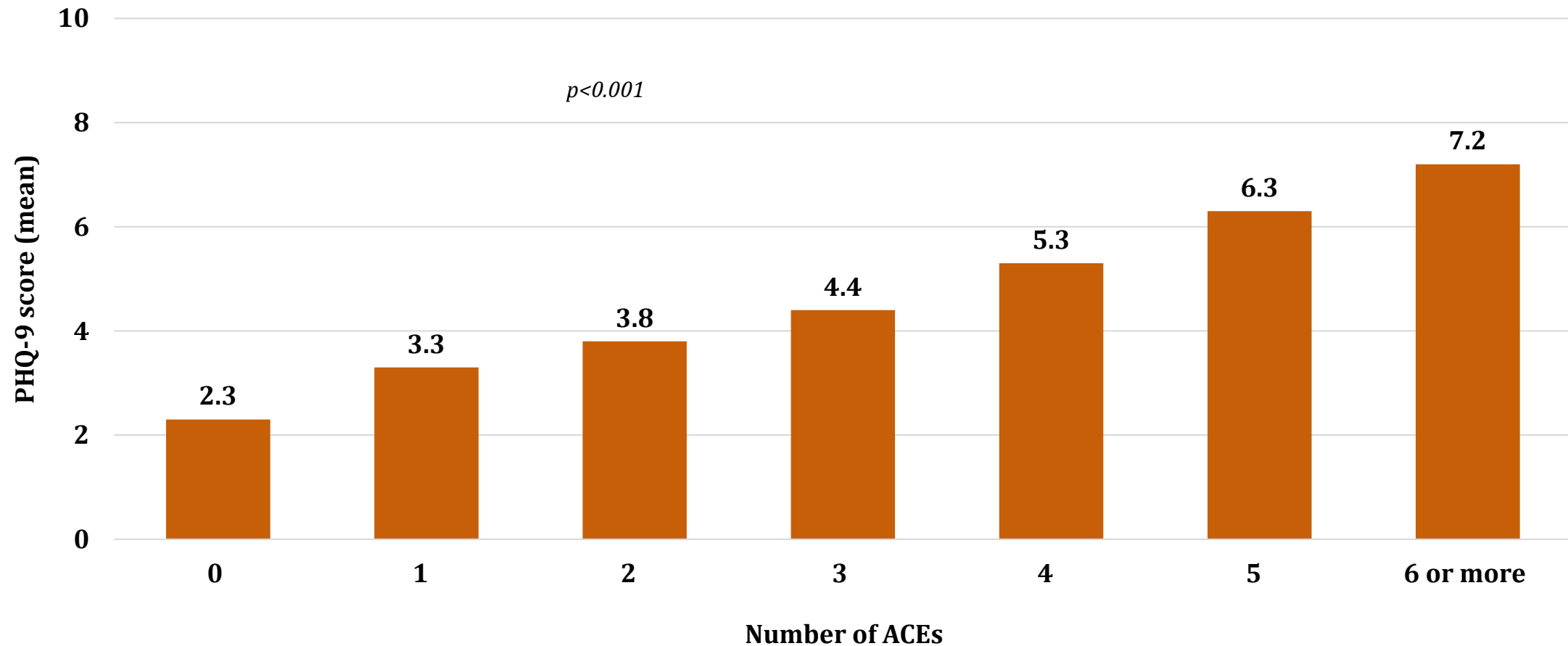
Type of ACE	n	%
Emotional abuse	932	36.5
Parental divorce	829	32.4
Parental substance use problems	794	31.1
Physical abuse	770	30.1
Emotionally neglect	708	27.7
Sexual abuse	689	27.0
Mental illness/suicide attempt by a family member	670	26.2
Exposure to intimate partner violence	485	19.0
Physical neglect	299	11.2
Incarceration of a family member	223	8.7

- 71.4% experienced ACEs
- 54% experienced multiple ACEs





ACEs and burden of depressive symptoms (N=2,556)

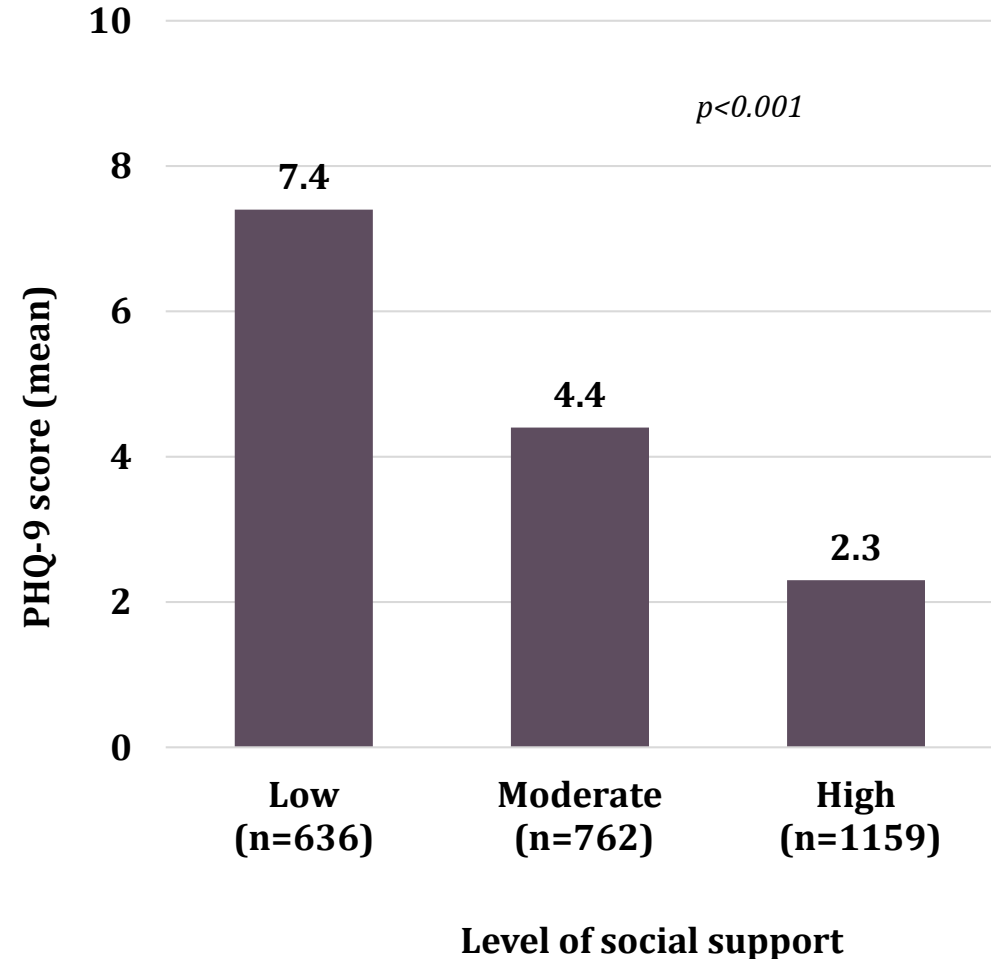
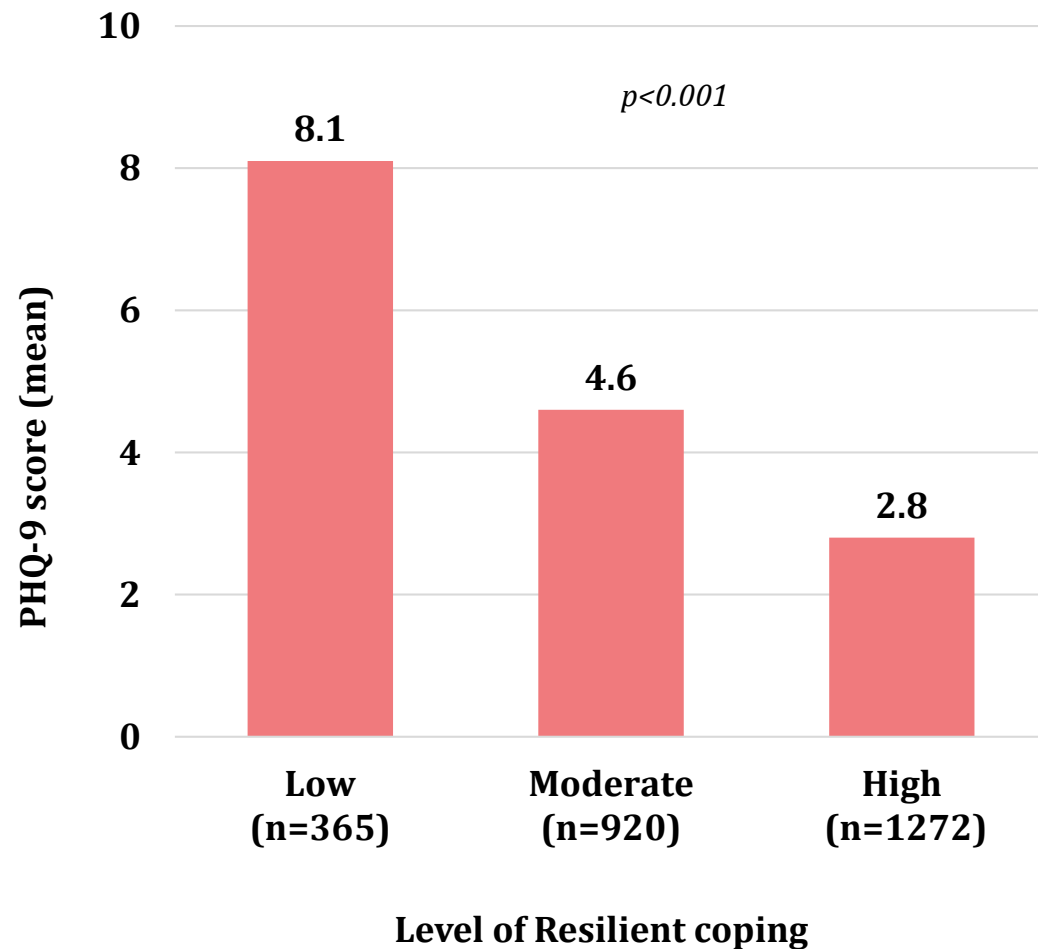


Note: Higher PHQ-9 score indicates greater burden of depressive symptoms





People with higher levels of social support and resilient coping have lower burden of depressive symptoms (N=2,556)





Moderating effects of coping and social support on the relationship between number of ACEs and depressive symptoms (N=2,556)

Predictor variable	Unadjusted regression model		Multivariable regression model †	
	B	p	B	p
Adverse Childhood Experiences (ACEs)				
Number of ACEs	-0.52	0.400	-0.93	0.114
Resilient coping				
Resilient coping score	-4.40	<0.001	-4.14	<0.001
Social support				
Social support score	-3.60	<0.001	-3.40	<0.001
2-way interactions				
Number of ACEs * Social support	0.38	0.030	0.43	0.011
Number of ACEs * Resilient coping	0.38	0.044	0.46	0.011
Social support * Resilient coping	0.72	<0.001	0.70	<0.001
3-way interaction				
Number of ACEs * Social support * Resilient coping	-0.13	0.013	-0.14	0.003

† Multivariable regression model is adjusted for age, gender, sexual orientation, race, relationship status, education, income, and comorbidities.





Summary and conclusions

- ACEs are prevalent among OCS participants: 71.4% had experienced ≥ 1 ACEs and 54.1% had experienced multiple forms of ACEs.
- Higher number of ACEs were associated with greater burden of depressive symptoms.
- Higher levels of resilient coping and social support were associated with lower burden of depressive symptoms.
- Resilient coping and social support moderated the association between number of ACEs and depressive symptoms, with PLWH who reported higher levels of coping and social support benefiting the most.
- Interventions that boost coping skills and social support may contribute to improved mental health among PLWH.





Limitations

- Cross-sectional analyses
- Brevity of Resilient coping tool
- Generalizability of findings limited to PWH in care





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Thank you!

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For more information about OCS:

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