

# Adverse Childhood Experiences and Alcohol Use among Black College Students: Examining the Role of Depression

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## Abstract

Research has consistently shown that adverse childhood experiences (ACEs) are linked to adult health risk behaviors such as excessive alcohol use (Felitti, 1998). However, few studies have investigated this relationship among Black young adults, and, because of the frequent use of dated ACE measures, even fewer studies have explored the possible effects of additional adversities specific to contemporary generations on outcomes like alcohol use. Although research suggests that Black college students are at lower risk for hazardous drinking patterns (Kapner, 2008), the limited research available suggests that ACEs alter the drinking patterns of Black students (Forster et al., 2018) and depressive symptoms predict greater alcohol consumption for this ethnic group (Cho & Kogan, 2016; Su et al., 2018; Walton et al., 2015). The current study investigated the relationship between ACEs and hazardous patterns of drinking including frequency of drinking, binge drinking, and heavy drinking. Depressive symptoms were tested as a mediator between ACEs.

## Introduction

The present investigation is guided by Khantzian's (1997), self-medication hypothesis which suggests that intolerance to a heightened negative affective state will prompt use of a specific substance to counteract negative emotions. Trauma research and studies on human development have suggested that pervasive adverse events during childhood make individuals more vulnerable to future stressors (Karatekin, 2018). Childhood adversity is a potential risk factor for depressive symptoms and students may use alcohol as a coping mechanism. Black Americans are more likely to experience higher numbers of adverse events (Sacks et al., 2014). , therefore studying the relationship among ACEs, depressive symptoms, and alcohol use is imperative.

**H<sub>1</sub>:** High ACE scores will positively associate with higher frequency of alcohol use, binge drinking, and heavy drinking episodes.

**H<sub>2</sub>:** Depressive symptoms will mediate the relationship between ACE scores and the three alcohol consumption variables

## Methods and Materials

A sample of 282 Black students attending a historically Black university were recruited to complete an online survey through campus advertisements. Students were provided incentives for their participation.

### Demographics

- 96.1% mono-racial Black, 3.9% biracial Black
- Female (79.8%), Male (20.2); Mean age 20.56(*SD*= 1.73).
- 20.2% freshman, 22.7% sophomores, 30.9% juniors, 24.8% seniors, and 1.4% master's level students.

### Measures

- **Adverse Childhood Events:** Expanded ACE Questionnaire (Finkelhor et al., 2012)
- **Depressive Symptoms:** Center for Epidemiologic Studies Depression-Revised (Eaton et al., 2004)
- **Alcohol Use:** Youth Risk Behavior Survey (CDC, 2009)
- **Neuroticism:** The Big Factor Personality Inventory (John et al., 1999)

ACE scores	# of Yes Responses (%)
0	80 (28%)
1	28 (17%)
2	33 (11.7%)
3	27 (9.6%)
4	27 (9.6%)
5 or more	65 (23%)
Missing	2 (.7%)

## Results

### Statistical Analyses

Process Macro model 4 was used to test the mediating effect of depressive symptoms between ACE scores and the frequency of alcohol use, binge drinking episodes, and heavy drinking episodes.

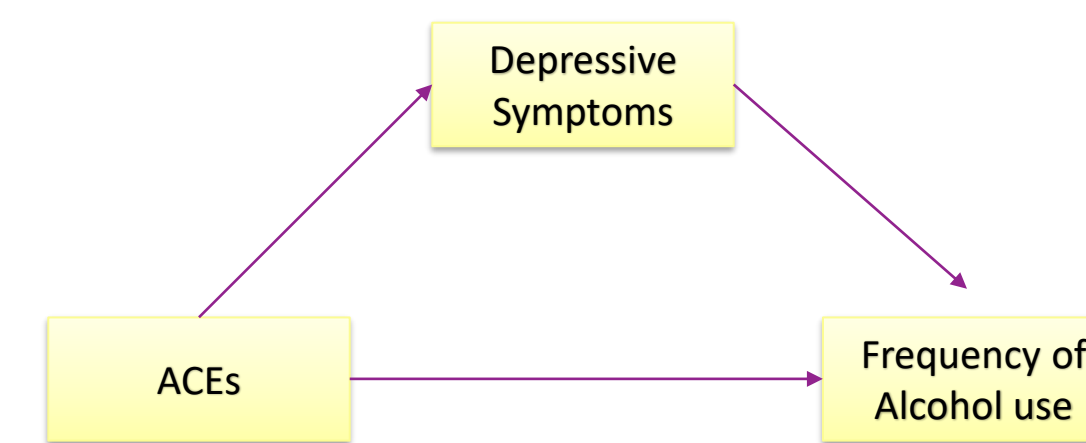


Figure 1. Mediation Model for Frequency of Alcohol Consumption.

- ACEs was associated with higher symptoms of depression  $b(4,267) = 1.87$ ,  $SE = .29$ ,  $p < .001$ , 95% CI [1.29 - 2.45].
- Depressive symptoms had a full mediating effect in the frequency of alcohol consumption model  $b(5,266) = .02$ ,  $SE = .01$ ,  $p = .002$ , 95% CI [.00 - .03]

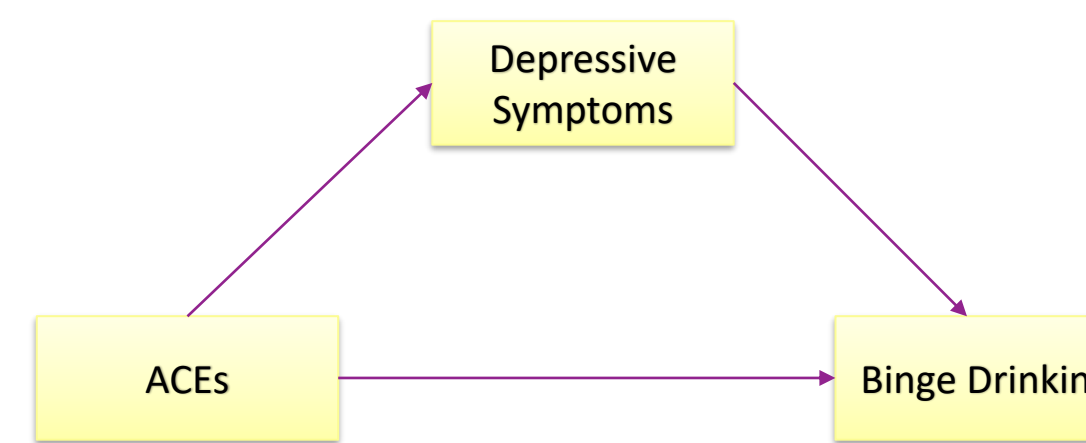


Figure 1. Mediation Model for Binge Drinking Episodes.

- ACEs was associated with higher symptoms of depression  $b(4,267) = 1.87$ ,  $SE = .29$ ,  $p < .001$ , 95% CI [1.29 - 2.45].
- Depressive symptoms had a full mediating effect in the binge drinking models  $b(5,266) = .03$ ,  $SE = .01$ ,  $p = .01$ , 95% CI [.00 - .03].

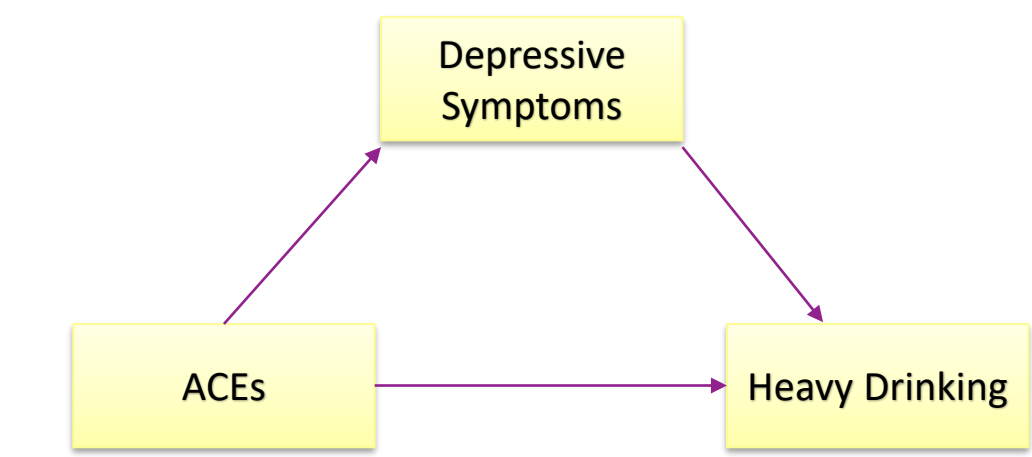


Figure 3. Mediation Model for Heavy Drinking Episodes.

- ACEs was associated with higher symptoms of depression  $b(4,267) = 1.87$ ,  $SE = .29$ ,  $p < .001$ , 95% CI [1.29 - 2.45].
- Depressive symptoms had a partial mediating effect in the heavy drinking model  $b(5,266) = .03$ ,  $SE = .01$ ,  $p = .003$ , 95% CI [.00 - .04].
- ACEs has a direct positive association with heavy drinking  $b(6,266) = .09$ ,  $SE = .04$ ,  $p = .04$ , 95% CI [.00 - .18].

## Discussion

Results revealed a relationship among ACEs, depression, and alcohol use for Black students. ACEs was found to indirectly associate with hazardous drinking patterns through depressive symptoms. Results revealed that depression partially mediates for heavy drinking but fully mediates the frequency of drinking and binge drinking, a finding that has implications for intervention and future research. Depressive symptoms accounted for a portion of the variance in heavy drinking, therefore additional mediating factors should be considered. This study utilized a cross-sectional research design, which prevented the examination of cause and effect relationships. With regards to the demographic makeup, the sample consisted of predominately Black female students, thus gender differences were unable to be explored.

## Implications

Teaching harm reduction methods or protective behavioral strategies could be especially crucial for Black students who are experiencing depressive symptoms and have a history of childhood adversity. Alcohol intervention studies for college students rarely include samples of Black students; thus, future studies should examine the efficacy of brief alcohol interventions for Black students. Furthermore, examining racial difference in the experience of adversities and negative outcomes can aid in establishing culture specific treatments for childhood adversity. Results from this study should encourage further research not only on the effects of childhood adversity among Black students but also to identify potential pathways to hazardous drinking.

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