

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

Amanda N. Banks, M.A., Prairie View A&M University; Tamara L. Brown, PhD, University of North Texas

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.

H₁: High ACE scores will positively associate with higher frequency of alcohol use, binge drinking, and heavy drinking episodes.

H₂: 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.

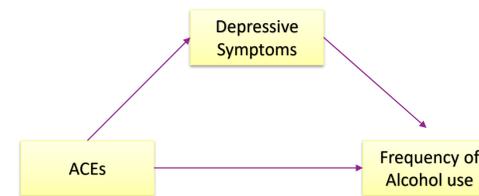


Figure 1. Mediation Model for Frequency of Alcohol Consumption.

- 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 $b(5,266) = .02, SE = .01, p = .002, 95\% CI [.00 - .03]$

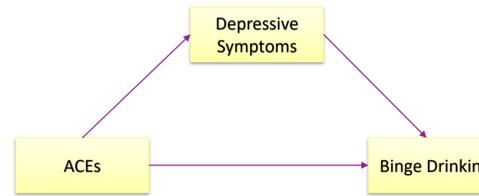


Figure 1. Mediation Model for Binge Drinking Episodes.

- 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 $b(5,266) = .03, SE = .01, p = .01, 95\% CI [.00 - .03]$.

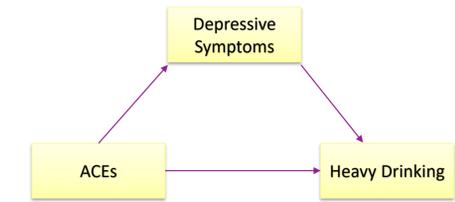


Figure 3. Mediation Model for Heavy Drinking Episodes.

- 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.

Contact

Amanda N. Banks, M.A.
 Doctoral Research Assistant
 Email: abanks18@student.pvamu.edu



References

- Centers for Disease Control and Prevention. (2009). *Youth risk behavior surveillance - United States, 2008*. <https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>
- Cho, J., & Kogan, S. (2016). Risk and protective processes predicting rural Black young men's substance abuse. *American Journal of Community Psychology*, 58(3).
- Eaton, W. W., Smith, C., Ybarra, M., Muntaner, C., & Tien, A. (2004). Center for Epidemiologic Studies Depression Scale: Review and revision (CES-D and CES-DR). In M. E. Maruish (Ed.), *The Use of Psychological Testing for Treatment Planning and Outcomes Assessment* (3rd Ed.). Lawrence Erlbaum
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V. J., Koss, M. P., Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences study. *American Journal of Preventive Medicine*, 14(4), 245-258.
- Finkelhor, D., Shattuck, A., Turner, H., & Hamby, S. (2015). A revised inventory of adverse childhood experiences. *Child Abuse & Neglect*, 48, 13-21.
- Forster, M., Grigsby, T. J., Rogers, C. J., & Benjamin, S. M. (2018). The relationship between family-based adverse childhood experiences and substance use behaviors among a diverse sample of college students. *Addictive Behavior*, 76, 298-304.
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality: Theory and Research* (Vol. 2, pp. 102-138). Guilford Press.
- Kapner, D. A. (2008). Alcohol and other drug use at historically black colleges and universities. The Higher Education Center for Alcohol and other Drug Abuse and Violence Prevention. Retrieved from
- Khantzian, E. L. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry*, 4(5), 231-234. <http://www.higheredcenter.org/files/product/hbcu.pdf>
- Karatekin, C. (2018). Adverse childhood experiences (ACEs), stress and mental health in college students. *Stress and Health*, 34(1), 36-45. doi:10.1002/smi.2761
- Slack, K. S., Font, S. A., & Jones, J. (2017). The complex interplay of adverse childhood experiences, race, and income. *Health & Social Work*, 42(1), e24-e31.
- Su, J., Kuo, S. I., Meyers, J. L., Guy, M. C., & Dick, D. M. (2018). Examining interactions between genetic risk for alcohol problems, peer deviance, and interpersonal traumatic events on trajectories of alcohol use disorder symptoms among Black college students. *Development and Psychopathology*, 1-13.
- Walton, I. N., Dawson-Edwards, C., & Higgins, G. E. (2015). General strain theory of collegiate drinking patterns among Black female students. *American Journal of Criminal Justice*, 40, 169-182.