

Adverse Childhood Experiences and Health-related Lifestyles: Examining the Role of Perceived Stress

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Introduction

- Adverse childhood experiences (ACEs) are defined as potentially traumatic situations such as abuse, neglect, and household dysfunction, that occur before the individual is 18 years old (Felitti et al., 1998).
- ACEs intensify the onset of mental health problems such as depression and anxiety within the college student population (Hughes, et al., 2017; Larson et al., 2022; Merians et al., 2019).
- While the association between ACEs and physical and mental health outcomes has been well established, there is also initial evidence linking ACEs to relevant lifestyle factors such as alcohol and tobacco use (Assini-Meytin et al., 2022; Martinasek et al., 2021), sleep, fruit and vegetable intake, and sedentary behaviors (Hadwen, et al., 2022; Windle et al., 2018).
- This study aims to explore the association between ACEs and lifestyle factors, and to examine whether perceived stress mediates this relationship.

Methods

Sample:

- Five hundred and two college students from the participant pool, Prolific.

Measures:

- ACEs was measured using the Behavioral Risk Surveillance Survey ACEs module (CDC, 2009).
- Physical activity was measured using the Godin Leisure-Time Exercise Questionnaire (Godin & Shephard, 1985).
- Diet was measured using two items from the Mini-Eat including servings of fruit and vegetable intake. (Lara-Breitinger et al., 2023)
- Sleep quantity was measured using the Brief Pittsburg Sleep Quality Index (B-PSQI; Sancho-Domingo et al., 2021).
- Alcohol use was measured by asking participants to indicate how many drinks were consumed on each day of the week.
- Stress was measured using the Perceived Stress Scale (Cohen, 1983).

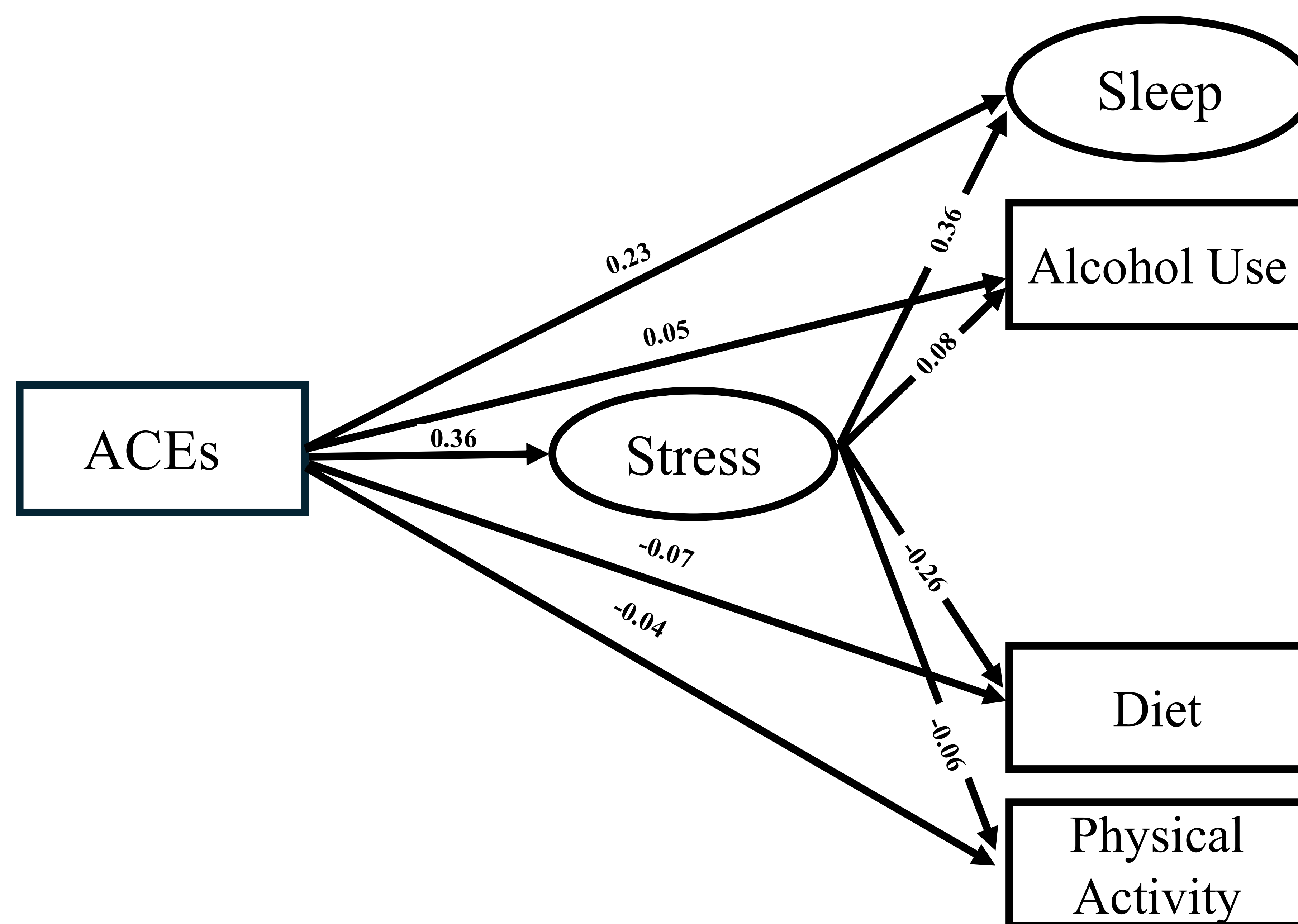
Procedures:

- Interested participants provided consent that was approved by the Institutional Review Board at The University of Southern Mississippi
- Exclusion criteria included individuals who are younger than 18 years old, who are non-English speakers, and who do not currently reside within the United States.
- Inclusion criteria included individuals that are currently enrolled in college or a university either full-time or part-time and are aged 18-25.
- Participants were paid \$3.50 according to their level of completion via the Prolific platform.

Analysis:

- Structural equation models in Mplus were used to examine whether perceived stress mediated the relationship between ACEs and lifestyle behaviors.

Day-to-day stress explains part of the associations between adverse childhood experiences and health-related lifestyle behaviors



Perceived stress and sleep were modeled as latent variables. Coefficients in the figure are standardized coefficients. In the model the four lifestyle factors are correlated and are not shown in the figure due to space restrictions.

Results

- The main measurement model indicated that the model fit the data relatively well ($\chi^2(136) = 3243.41$, CFI = .95, RMSEA = 0.53, 95% CI [.05, .06]), SRMR = .06).
- The indirect path from ACEs to sleep was significant ($\beta = 0.28$, SE = 0.022, $p < .001$).
- The indirect path from ACEs to alcohol use was not significant ($\beta = 0.03$, SE = 0.023, $p = .186$).
- The indirect path from ACEs to diet was significant ($\beta = -0.06$, SE = 0.021, $p = .008$).
- The indirect path from ACEs to physical activity was not significant ($\beta = -0.022$, SE = 0.017, $p = .216$).

Discussion

- Those with higher ACEs report more disturbed sleep and lower fruit and vegetable intake, potentially explaining long-term health disparities.
- It may be that ACEs has long-term physiological and psychological impacts, leading to perceptions of stress and difficulty initiating and maintaining healthy lifestyles.
- Strategies aimed at managing stress could enhance one's diet and sleep quality, especially for those with a history of adverse experiences.
- Stress management skills could be taught and implemented to improve a multitude of lifestyle factors. Such interventions could be tested as independent or additive components to traditional interventions.
- Future research could also explore when this effect may occur. Furthermore, using a qualitative or mixed-methods research approach would provide valuable information regarding students' personal experiences.

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