Examining emotional invalidation as a potential moderator between adverse childhood

experiences and perceptions of academic stress

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Abstract

Adverse childhood experiences (ACEs) have been linked to numerous problems including physical and mental health problems, and socioemotional development issues. Socioemotional variables appear to be particularly important in the later development of negative outcomes (Chainey & Burke, 2021), including emotional validation (Lambie & Lindberg, 2016). We hypothesized that higher levels of adverse childhood experiences and higher levels of emotional invalidation would be correlated with lower levels of academic eustress. We also hypothesized that emotional invalidation would moderate the relationship between adverse childhood experiences and positive academic stress perception (eustress). To examine our research question, we used the following measures: a demographics questionnaire, the Childhood Experiences Survey (CES; Mersky et al., 2017), Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007), and the Academic Eustress Scale (AES; O'Sullivan, 2011). ANCOVA results demonstrate no significant relationship between adverse childhood experiences, emotional invalidation, and academic eustress. Correlation analyses supported our hypothesis that higher levels of emotional invalidation would be related to lower levels of academic eustress but did not support our hypothesis that higher levels of adverse childhood experiences would be related to lower levels of academic eustress. Our findings require further investigation, as our results differ from those of other studies.

Examining emotional invalidation as a potential moderator between adverse childhood experiences and perceptions of academic stress

Over the past century, there has been a shift in the identification, conceptualization, and measurement of traumatic experiences. Previously, trauma research focused primarily on traumatic events such as war, crime, natural disasters, and other catastrophic events. Through the understanding and identification of the effects of trauma on soldiers returning from war, researchers, for the first time, were able to connect the soldiers' experiences and symptoms to a diagnosis of Post-Traumatic Stress Disorder (at the time, "shell-shock syndrome"). This shift from conceptualizing trauma as a result of a specific incident to a disorder that persists across one's life, laid the groundwork for research on chronic or recurrent trauma. While the majority of research during that time focused on veterans, research in the field began to expand to investigate who could be affected by traumatic experiences and in what ways.

With this expansion of trauma research focusing primarily on adults, the first study to investigate the effects of traumatic experiences that occur during childhood, *Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults* (Felitti et al., 1998), changed the way that trauma is conceptualized to what it is today. Researchers, as part of the CDC-Kaiser Permanente adverse childhood experiences (ACE) study sent a questionnaire to 13,494 adults who had received a standardized medical evaluation to inquire about childhood experiences (Felitti et al., 1998). The original questionnaire included eight questions related to childhood abuse including psychological abuse (2), physical abuse (2), and sexual abuse (4), as well as nine questions asking about exposure to household dysfunction during childhood including substance abuse (2), mental illness (2), violent treatment of a mother or stepmother (4), and criminal behavior (1). Simultaneously, the researchers identified participant levels of 10 risk factors for the leading causes of death: smoking, severe obesity,

physical inactivity, depressed mood, suicide attempt, alcoholism, any drug use, injected drug use, 50 or more lifetime sexual partners, and a history of a sexually transmitted disease (Felitti et al., 1998).

In this landmark ACE study, over half of respondents reported at least one exposure across the seven categories (Felitti et al., 1998). Results from their study demonstrate a dose response relationship between the number of exposures and each of the 10 risk factors for the leading causes of death. The seven categories were also strongly related with one another with exposure to one category increasing the likelihood of exposure to another (Dong et al., 2004; Felitti et al., 1998). In the second wave of data collection, emotional and physical neglect, and loss of a parent (through divorce, separation, or death) were identified as additional categories of exposure, resulting in the widely used 10-item Adverse Childhood Experience Questionnaire (Dietz et al., 1999; Felitti et al., 1998).

As stated previously, adverse childhood experiences increase the likelihood of developing health risks and conditions and exhibit a dose response effect where each additional adverse childhood experience significantly increases the likelihood of those risks and conditions (Bethell et al., 2014; Dong et al., 2004; Felitti et al., 1998). Adverse childhood experiences (ACEs) have been linked to increased likelihood of morbidity, risky behavior, and disability, with specific positive correlations between ACEs and smoking, risky HIV behavior, and disability due to poor health (Campbell et al., 2016). In addition to consequences for physical health and well-being, adverse childhood experiences have also been linked to numerous mental health problems. ACEs have been correlated with increased psychological distress (Nurius et al., 2015), levels of anxiety and depression, aggression, attention issues (Pfaff & Schlarb, 2018), substance abuse (Campbell et al., 2016), suicide attempts (Fuller-Thomson et al., 2016), and

borderline personality disorder (BPD) to name a few (Khanijahani & Sualp, 2022). This can be explained by a process in which ACEs disrupt the social and emotional development of a child, and epigenetic processes, leading to negative health outcomes. After a child has an adverse experience, they begin to experience social and emotional difficulties, which leads to changes in the body's stress response, neuroanatomy, and neurochemistry (e.g., Yehuda et al., 2010). These changes can lead to alterations at the level of the child's DNA, resulting in later health outcomes (e.g., Roy et al., 2010).

The social and emotional disruptions related to ACEs, including emotional difficulties (Chainey & Burke, 2021) and avoidant and anxious insecure attachment strategies (Brownlee, 2016), appear to be particularly important in the later development of negative outcomes. One socioemotional variable tied intimately to emotional development is emotional validation (Lambie & Lindberg, 2016). Emotional validation is the nonjudgmental reference to and acceptance of another person's emotion or emotional perspective. Inversely, emotional invalidation is any judgmental, dismissive, or inaccurate reference to another person's emotion, including any attempt to try to change another's emotional perspective through the invalidation of their current emotional experience. Emotional validation has been studied as a key component of emotional awareness (Linehan, 1993), and maternal emotional validation and invalidation have significant independent effects on their child's emotional awareness (Lambie & Lindberg, 2016).

After an adverse childhood experience occurs, children learn different coping strategies, which can lead to different outcomes. Perception of how well one can manage distress depends on the individual's overall interpretation of stress (Kalia & Knauft, 2020), and youth exposed to ACEs who believe they can manage their distress and move forward exhibit more positive

outcomes (Jiang et al., 2020; Logan-Greene et al., 2017). Emotional validation is an important factor of coping because children and adolescents met with emotionally validating responses by caregivers are more likely to see challenges as obstacles they can overcome (Hall & Cook, 2012). These children met with validating responses may be uniquely positioned to demonstrate and experience another important coping variable, eustress. Eustress is defined as a positive psychological response to a stressor, resulting in a positive outcome (O'Sullivan, 2011).

Eustress as a method of coping with academic stressors is defined as academic eustress. Those with higher levels of academic eustress perform with higher GPAs (Travis et al., 2020), particularly for children exposed to ACEs (Long, 2018). This may be because ACEs are related to increased academic stress, lower academic performance, less educational achievement (Nurius et al., 2015), lower rate of school engagement (Bethell et al., 2014), higher reports of high school non-completion (Metzler et al., 2017), lower educational attainment, and unemployment (Merrick, 2019). The strength of this relationship between ACEs and negative academic outcomes likely contribute to the gains from academic eustress being higher among this population (Long, 2018). Whatever the reason, the identification of academic eustress as a protective factor between ACEs and negative academic outcomes makes it exceptionally important to figure out if there are mechanisms that impact the relationship between ACEs and the development of academic eustress.

In the current study, we seek to further our understanding of the relationship among adverse childhood experiences, emotional invalidation, and academic eustress. Previous research demonstrates that ACEs are related to increased academic stress and lower academic performance (Nurius et al., 2015), but this relationship lessens when individuals report higher levels of academic eustress (Travis et al., 2020). Additionally, higher levels of emotional

validation are associated with lower stress levels and better academic performance (Gottman, 1997; Hall & Cook, 2012). We hypothesize that children met with emotionally invalidating responses by caregivers will be less likely to see challenges as obstacles they can overcome, and therefore report lower levels of academic eustress. We hypothesize that ACEs will be related to low levels of academic eustress and emotional invalidation will moderate this relationship, so that those with ACEs and higher levels of emotional invalidation will report lower levels of academic eustress than all other groups.

Method

Participants

We recruited 140 college students through the SONA system used by The University of Tampa's Psychology Department. Data from two participants was removed due to evidence that the questions were not read (based on a minimal duration time of 4 minutes.) As such, we analyzed data from 126 participants (18 male, 108 female, 1 gender fluid, 4 non-binary). Participants ages ranged from 18 to 23 (M= 18.68). Respondents were mostly freshman 64.3%, followed by sophomores 27.0%, juniors and seniors were both relatively low with 2.4% and 6.3%, respectively. Participants' majors varied with over 20 different areas of study, the highest was pre-nursing/nursing (n= 27), followed by psychology (n= 18), allied health (n= 14), marketing (n= 11), and criminology/criminal justice (n= 7). The majority of participants identified as Non-Hispanic White (n= 102), followed by Hispanic White (n= 14), Non-Hispanic Black (n= 8), Hispanic Black (n= 1), and Middle eastern (n= 1). Twenty-three participants (18.3%) indicated that they identify as a first-generation college student, which we defined as neither parent completing a four-year degree. Based on their typical living situation from birth to

five years of age, 96.0% of participants indicated that they lived with both natural parents, either

together or apart. From ages 6-11, that number was 88.7%. From ages 12-18, it was 81.0%.

Measures

Demographics Questionnaire

The demographics questionnaire consists of questions regarding age, gender, race and

ethnicity, academic year, academic major, first-generation status, and typical living situation

through different ages from birth to 18 years. Questions and answer choices follow the

guidelines of The University of Tampa's Institutional Review Board (IRB).

Childhood Experiences Survey (CES; Mersky et al., 2017)

The Childhood Experiences Survey (CES; Mersky et al., 2017) is a self-report measure

that combines the conventional ten-item Adverse Childhood Experiences (ACE) Questionnaire

(Felitti et al., 1998) with an additional seven measures of ACEs, resulting in 17 total items. Three

of the items: physical abuse, sexual abuse, and domestic violence are rated on a 3-point Likert-

type scale with responses *never*, *once*, or *more than once*. An example item is "How often did

your parents or adults in your home ever slap, hit, beat, kick, or physically hurt each other?"

(domestic violence). Five of the items: emotional abuse, family financial problems, food

insecurity, homelessness, and peer victimization/bullying are rated on a 5-point Likert-type scale

with responses, *never*, *rarely*, *sometimes*, *often*, or *very often*. An example item is "How often

were you homeless when you were growing up?" (homelessness). Two of the items: physical and

emotion neglect are rated on a 5-point Likert-type scale with responses *never*, *rarely*, *sometimes*,

most of the time, or *always*. An example item is "How often was there an adult in your household

who tried hard to make sure your basic needs were met?" (physical neglect). The other seven

items are in a yes/no format. An example item is "Did you live with anyone who was depressed,

mentally ill, or suicidal?" (mental illness). Questions were organized based on response

options/scoring type, and were presented in the order described above. Scores were converted

into a point system (0 or 1) based on the scoring guidelines outlined in the original study

(Mersky et al., 2017). These points were totaled for a total ACE score, ranging between 0 and 17,

where higher scores indicate more adverse childhood experiences.

Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007)

The Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007) is a self-

report measure of exposure to parental invalidation (Robertson et al., 2013). It consists of 14

items that assess parental behaviors that reflect the eight themes of an emotionally invalidating

environment. Each item is rated on a 5-point Likert-type scale with responses *never*, *rarely*, *some*

of the time, *most of the time*, or *all of the time*, for each parent. Participants were asked to answer

the questions in the context of one primary caregiver. An example item is "My primary caregiver

would become angry if I disagreed with them". Participants were also asked to identify their

primary caregiver before answering the questions. Items 5, 8, 12, and 14 are reverse scored.

Scores are summed to result in a total score ranging from 14 to 70. Higher scores indicate higher

levels of emotional invalidation during childhood. This measure demonstrates strong

psychometric properties in previous research (Mountford et al., 2007) and had strong inter-item

reliability with our current sample (Chronbach's α = .91).

Academic Eustress Scale (AES; O'Sullivan, 2011)

The Academic Eustress Scale (AES; O'Sullivan, 2011) measures levels of academic

eustress with 10 items scored on a 6-point Likert-type scale with responses *never*, *almost never*,

sometimes, *often*, *very often*, or *always*. An example item is "How often do you effectively cope

with stressful changes that occur in your academic life?" In addition to the 10 scored items, there

are five filler items and items 9 and 10 are reverse scored. Scores range from 10 to 60. Higher

scores indicate higher levels of academic eustress. This measure demonstrates moderate to strong

psychometric properties in previous research (O'Sullivan, 2011; Chronbach's α = .766 (wave 1);

Chronbach's α= .806 (wave 2)) and moderate inter-item reliability with our current sample

(Chronbach's α = .72).

Procedure

Participants were recruited through SONA and received course credit for their

participation. Data collection took place in a psychological research lab in small groups of up to

10 participants, with research lab assistants present. Participants scanned a Qualtrics QR code on

their electronic devices. Initially, participants were presented with an informed consent form.

Once participants consented, they were presented with the demographics questionnaire, the

Childhood Experiences Survey (CES; Mersky et al., 2017), the *Invalidating Childhood*

Environment Scale (ICES; Mountford et al., 2007), and the *Academic Eustress Scale* (AES;

O'Sullivan, 2011). Following survey completion, participants were presented with a debriefing

form. Due to the sensitive nature of questions being asked, students were provided with a

resource of available mental health services on and off campus. This is standard procedure for

research studies that inquire about ACEs.

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Results

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In order to test our hypothesis that emotional invalidation will moderate the relationship

between ACEs and academic eustress, we conducted an analysis of covariance (ANCOVA). We

chose to use an ANCOVA due to the categorical nature of the independent variable (ACEs;

Mersky et al., 2017). As such, we entered academic eustress scores as the dependent variable

with ACEs as the fixed variable and emotional invalidation as the covariate. We then used

regression analysis for each of the three levels of the independent variable (ACEs) to determine

if there were group differences due to a moderation effect. Prior to running the ANCOVA for

hypothesis testing, we ran descriptive statistics and normality testing to verify the

appropriateness of this analysis. For all analyses, we used listwise deletion to deal with missing

data.

Descriptive Statistics

Frequency data for the ACEs measured by the CES are reported in Table 1. Data from the

Childhood Experiences Survey (CES; Mersky et al., 2017) was categorized into three groups for

ANCOVA analysis: Group 1 (no ACEs): CES score of 0 (*n*= 37), Group 2 (low ACEs): CES

scores 1-2 (*n*= 48), and Group 3 (moderate-high ACEs): CES scores 3 and up (*n*= 30). Academic

eustress and emotional invalidation were scored and interpreted as continuous variables. Scores

on the AES ranged from 15 to 48 with (*M*= 35.38, *SD*= 5.82, *n*= 134). Scores from the ICES

ranged from 14 to 61 with (*M*= 24.99, *SD*= 9.89, *n*= 138) (see Table 2).

Normality testing for ANCOVA includes testing for homogeneity of variance and the

normal distribution of data. A Levene's Test of Equality of Error Variances was used to

determine homogeneity across groups, the findings indicate that the error variance is equal across

all groups *p*= .448, confirming that the data passes the assumption of the ANCOVA.

Hypothesis Testing

Prior to running the ANCOVA, we ran correlations to examine the relationships among

the variables. For the purpose of correlation analyses, CES data was left as a continuous variable.

Scores on the CES ranged from 0 to 10 with (*M*= 1.84, *SD* = 2.09, *n*= 124) (see Table 2). Two

significant correlations were identified. First, higher levels of invalidating experiences in

childhood were correlated with lower levels of academic eustress, (*r*= -.270, *p*= .002) (see Table

2). Second, higher levels of invalidating experiences in childhood were correlated with higher

levels of adverse childhood experiences (r= .592, p < .001) (see Table 2). There was no

significant correlation between adverse childhood experiences and academic eustress (r= -.134,

p= .155) (see Table 2).

The results from the ANCOVA indicate that there were no main effects for adverse

childhood experiences (F= .069, p= .933) or childhood emotional invalidation (F= 1.157, p=

.284). We then conducted three regression analyses (one with each level of the ACEs variable) to

test the predictive relationship of emotional invalidation on academic eustress and compare the

slopes of each regression equation. The slopes for each group did not differ from one another

significantly (no ACEs: β = -.078; low ACEs: β = -.056; moderate ACEs: β = -.119). This

indicates that invalidating experiences during childhood did not moderate the relationship

between adverse childhood experiences and academic eustress (see Figure 1).

Discussion

We hypothesized that high levels of ACEs would be related to low levels of academic

eustress, and emotional invalidation would moderate this relationship. Our correlation analysis

supports our hypothesis that high levels of emotional invalidation are associated with low levels

of eustress. However, our ANCOVA and regression analysis results are nonsignificant,

indicating that our moderation hypothesis was not supported. Recent literature has suggested the

importance of emotional invalidation in the development of emotional problems, regardless of

the presence of adverse childhood experiences. There is evidence from existing literature and the

current study to support that emotional invalidation may be an important mechanism within

ACEs that leads to the development of certain psychosocial problems and psychological

disorders, including borderline personality disorder (e.g., Crowell et al., 2009). It is important to consider this overlap between emotional invalidation and ACEs in the context of our results.

Our study has a few limitations. One limitation of our study is that we are under powered for the ANCOVA due to our participant sample size. Another limitation is that there was little variance across the CES scores with no score higher than ten, and the scores were skewed, with the majority of respondents reporting 0 or 1 ACEs. Data is often skewed with ACE measures; however, our sample size was much smaller than those of previous studies, allowing the defined groups to be more homogenous. It is also important to note that the population we collected data from are college students at a private university, and there may be a certain amount of resiliency required by these individuals to reach college. Additionally, retrospective self-report may be less reliable. However, because we measured perceptions of emotional invalidation and adverse experiences intentionally due to the importance of the personal experience, we believe that this should not significantly impact our data.

The Academic Eustress Scale showed only moderate inter-item reliability (Chronbach's $\alpha= .72$) and after further analysis, item 10 on the scale, "In general, how often are you unable to control the way you spend your time on schoolwork?" is not significantly correlated with any of the other items on the scale. The definition of eustress has two components: 1) a positive psychological response to a stressor that 2) leads to a positive outcome. Item 10 does not appear to measure either of those components of the definition. It may also be of importance to note these two features of the definition of eustress with regards to the other items. It appears that some of the items on the questionnaire better measure one part of the definition, while others better measure both. In future uses of this scale, a prior analysis should be done to determine which items to include and if items should be separated into subscales and scored differently.

In this study, we used academic eustress as our outcome variable. Eustress may be better conceptualized as a social support or predictor variable, like emotional validation, and not an outcome variable. As previously stated, those with higher levels of academic eustress perform with higher GPAs (Travis et al., 2020), and this research is particularly relevant for children with ACEs (Long, 2018). These are both examples of academic eustress being a potential measure of academic performance (GPA), and because eustress is a coping mechanism (response to a stressor), it may be better interpreted as such in research. However, due to the previously established relationship between academic eustress and academic performance in the literature, we wanted to further explore what factors may contribute to eustress more closely.

Future research needs to be done to determine the exact overlap between emotional invalidation and adverse childhood experiences. Understanding the way these variables work together will help us better understand the component(s) of adverse child experiences that are so harmful to development and provide researchers with target variables for intervention and prevention of harmful consequences. Adverse childhood experiences are difficult to prevent and are many times not discovered until later in life, so targeting variables that moderate the consequences early on may be the best method of action.

References

Bellis, M. A., Hardcastle, K., Ford, K., Hughes, K., Ashton, K., Quigg, Z., & Butler, N. (2017). Does

     continuous trusted adult support in childhood impart life-course resilience against adverse

     childhood experiences—A retrospective study on adult health-harming behaviours and mental

     well-being. *BMC Psychiatry*, *17*. http://dx.doi.org.esearch.ut.edu/10.1186/s12888-017-1260-z

Bethell, C. D., Newacheck, P., Hawes, E., & Halfon, N. (2014). Adverse Childhood Experiences:

     Assessing The Impact On Health And School Engagement And The Mitigating Role Of

     Resilience. *Health Affairs*, *33*(12), 2106–2115. https://doi.org/10.1377/hlthaff.2014.0914

Brownlee, A. V. (2016). Depression, childhood adverse experiences, and mentalizing as predictors of

     attachment anxiety and avoidance [Psy.D., Alliant International University]. In *ProQuest*

     Dissertations and Theses.

     http://www.proquest.com/docview/1865307615/abstract/499200D46A494899PQ/1

Campbell, J. A., Walker, R. J., & Egede, L. E. (2016). Associations Between Adverse Childhood

     Experiences, High-Risk Behaviors, and Morbidity in Adulthood. *American Journal of Preventive*

     Medicine, *50*(3), 344–352. https://doi.org/10.1016/j.amepre.2015.07.022

Chainey, C., & Burke, K. (2021). Emerging adult wellbeing: Associations with adverse childhood

     experiences, parenting practices and the parent-adolescent relationship. *Australian Psychologist*,

     56(3), 217–232. https://doi.org/10.1080/00050067.2021.1893596

Crowell, S. E., Beauchaine, T. P., & Linehan, M. M. (2009). A biosocial developmental model of

     borderline personality: Elaborating and extending linehan's theory. *Psychological Bulletin*,

     135(3), 495–510. https://doi.org/10.1037/a0015616

Dietz, P. M., Spitz, A. M., Anda, R. F., Williamson, D. F., McMahon, P. M., Santelli, J. S., Nordenberg, D. F., Felitti, V. J., & Kendrick, J. S. (1999). *Unintended Pregnancy Among Adult Women Exposed to Abuse or Household Dysfunction During Their Childhood*.

Dong, M., Anda, R. F., Felitti, V. J., Dube, S. R., Williamson, D. F., Thompson, T. J., Loo, C. M., & Giles, W. H. (2004). The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse & Neglect*, *28*(7), 771–784. https://doi.org/10.1016/j.chiabu.2004.01.008

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine*, *14*(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8

Fuller-Thomson, E., Baird, S. L., Dhrodia, R., & Brennenstuhl, S. (2016). The association between adverse childhood experiences (ACEs) and suicide attempts in a population-based study: Adverse childhood experience and suicide attempts. *Child: Care, Health and Development*, *42*(5), 725–734. https://doi.org/10.1111/cch.12351

Gottman, J. M. & DeClaire, J. (1997). *Raising an Emotionally Intelligent Child.* New York, N.Y.: Simon & Schuster Paperbacks.

Hall, K.D. & Cook, M. (2012). *The Power of Validation: Arming Your Child Against Bullying, Peer Pressure, Addiction, Self-Harm, and Out-of-Control Emotions.* Oakland, CA: New Harbinger Publications.

Jiang, Y., Hua, M., Yuan, T., Silin, H., Sun, L., Hui-jie, L., & Hongchuan, Z. (2020). Cumulative Risk and Subjective Well-Being Among Rural-to-Urban Migrant Adolescents in China:

Differential Moderating Roles of Stress Mindset and Resilience. *Journal of Happiness Studies*, *21*(7), 2429–2449. http://dx.doi.org.esearch.ut.edu/10.1007/s10902-019-00187-7

Kalia, V., & Knauft, K. (2020). Emotion regulation strategies modulate the effect of adverse childhood experiences on perceived chronic stress with implications for cognitive flexibility. *PLoS One*, *15*(6), e0235412. http://dx.doi.org.esearch.ut.edu/10.1371/journal.pone.0235412

Khanijahani, A., & Sualp, K. (2022). Adverse Childhood Experiences, Neighborhood Support, and Internalizing and Externalizing Mental Disorders among 6–17 years old US Children: Evidence from a Population-Based Study. *Community Mental Health Journal*, *58*(1), 166–178. https://doi.org/10.1007/s10597-021-00808-7

Lambie, J. A., & Lindberg, A. (2016). The Role of Maternal Emotional Validation and Invalidation on Children's Emotional Awareness. *Merrill-Palmer Quarterly*, *62*(2), 129–157. https://doi.org/10.13110/merrpalmquar1982.62.2.0129

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder.* Guilford Press.

Logan-Greene, P., Link to external site, this link will open in a new window, Tennyson, R. L., Nurius, P. S., & Borja, S. (2017). Adverse Childhood Experiences, Coping Resources, and Mental Health Problems among Court-Involved Youth. *Child & Youth Care Forum*, *46*(6), 923–946. http://dx.doi.org/10.1007/s10566-017-9413-2

Long, A. C. (2018). Effect of Stress Mindset and Adverse Childhood Experiences on College Students' Academic Success and Psychological Well-Being [Ph.D., Mississippi State University]. In *ProQuest Dissertations and Theses*. http://www.proquest.com/docview/2162621793/abstract/D93948E07020487APQ/1

Merrick, M. T. (2019). Vital Signs: Estimated Proportion of Adult Health Problems Attributable to

Adverse Childhood Experiences and Implications for Prevention — 25 States, 2015–2017.

MMWR. Morbidity and Mortality Weekly Report, *68*. https://doi.org/10.15585/mmwr.mm6844e1

Mersky, J. P., Janczewski, C. E., & Topitzes, J. (2017). Rethinking the Measurement of Adversity:

Moving Toward Second-Generation Research on Adverse Childhood Experiences. *Child

Maltreatment*, *22*(1), 58–68. https://doi.org/10.1177/1077559516679513

Metzler, M., Merrick, M. T., Klevens, J., Ports, K. A., & Ford, D. C. (2017). Adverse childhood

experiences and life opportunities: Shifting the narrative. *Children and Youth Services Review*,

72, 141–149. https://doi.org/10.1016/j.childyouth.2016.10.021

Mountford, V., Corstorphine, E., Tomlinson, S., & Waller, G. (2007). Development of a measure to

assess invalidating childhood environments in the eating disorders. *Eating Behaviors*, *8*(1), 48–

58. https://doi.org/10.1016/j.eatbeh.2006.01.003

Nurius, P. S., Green, S., Logan-Greene, P., & Borja, S. (2015). Life course pathways of adverse

childhood experiences toward adult psychological well-being: A stress process analysis. *Child

Abuse & Neglect*, *45*, 143–153. https://doi.org/10.1016/j.chiabu.2015.03.008

O'Sullivan, G. (2011). The Relationship Between Hope, Eustress, Self-Efficacy, and Life Satisfaction

Among Undergraduates. *Social Indicators Research*, *101*(1), 155–172.

https://doi.org/10.1007/s11205-010-9662-z

Pfaff, A., & Schlarb, A. A. (2018). Does your childhood define how you sleep and love? *Somnologie*,

22(3), 175–182. https://doi.org/10.1007/s11818-018-0168-2

Roy, A., Gorodetsky, E., Yuan, Q., Goldman, D., & Enoch, M.-A. (2010). Interaction of FKBP5, a

Stress-Related Gene, with Childhood Trauma Increases the Risk for Attempting Suicide.

Neuropsychopharmacology, *35*(8), 1674–1683. https://doi.org/10.1038/npp.2009.236

Travis, J., Kaszycki, A., Geden, M., & Bunde, J. (2020). Some stress is good stress: The challenge-

    hindrance framework, academic self-efficacy, and academic outcomes. *Journal of Educational*

    Psychology, *112*(8), 1632–1643. https://doi.org/10.1037/edu0000478

Yehuda, R., Flory, J. D., Pratchett, L. C., Buxbaum, J., Ising, M., & Holsboer, F. (2010). Putative

    biological mechanisms for the association between early life adversity and the subsequent

    development of PTSD. *Psychopharmacology*, *212*(3), 405–417. https://doi.org/10.1007/s00213-

    010-1969-6

Table 1

Childhood Experiences Survey (CES) Frequency Data

Number of ACEs	*n*
0	37
1	28
2	19
3	9
4	7
5	6
6	3
7	4
8	0
9	0
10	1
11	0
12	0
13	0
14	0
15	0
16	0
17	0

Figure 1

Academic Eustress and Emotional Invalidation Scores by CES Group
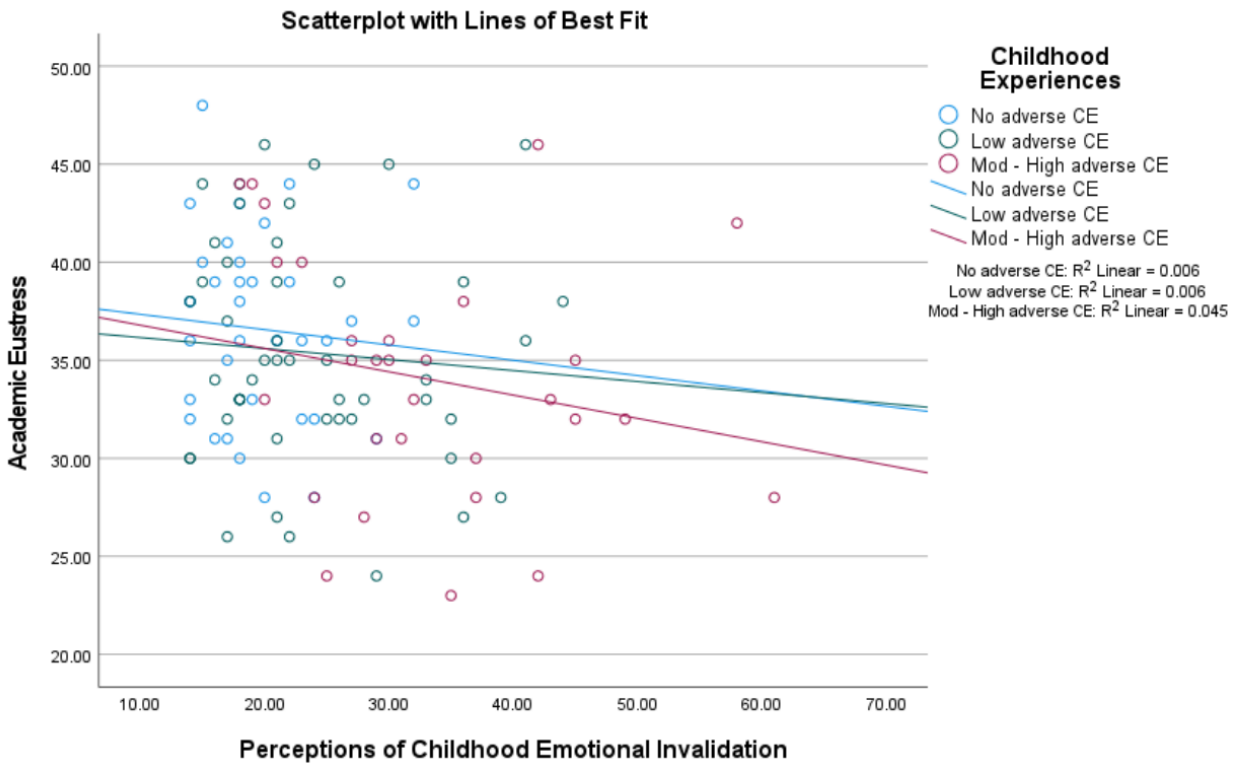
Table 2

Descriptive Statistics and Correlations for Study Variables

Variable	n	M	SD	1	2	3
1. Adverse Childhood Experiences	124	1.84	2.09	—		
2. Emotional Invalidation	138	24.99	9.89	.617**	—	
3. Academic Eustress	134	35.38	5.82	-.074	-.249**	—

*$p < .05$. **$p < .01$.