

COPING WITH NEGATIVE LIFE EVENTS DURING CHILDHOOD

By

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CHAPTER I

REVIEW OF LITERATURE

Overview

Both negative and positive childhood experiences are predictors for adult outcomes. Individuals who endure trauma during childhood are more likely to encounter drug and alcohol misuse, relationship challenges, anxiety, depression, suicide and self-harm, and numerous health-related issues (Felitti et al., 1998). While these long-term negative effects have been well documented, recent research has focused on predictors of resilience. Resilient individuals are those that despite adversity show better than expected outcomes. Protective factors, such as social support, may be important in buffering these negative effects and promote resilience. Understanding these factors may be especially important in emerging adults, because they are in a period of rapid development and face multiple challenges, such as increased independence.

Adverse Childhood Experiences

Recent research has explored the biological, psychological, and socio-environmental susceptibilities and resiliencies contributing to long-term health outcomes. In a study known as the Adverse Childhood Experiences (ACE) Study, Felitti et al. (1998) aimed to determine whether negative life events during childhood had long-term health impacts. In 1994, Kaiser Permanente and Center for Disease Control began collaboration on an epidemiologic study which uncovered that stressful or traumatic childhood experiences have impacts across the lifespan, thus, increasing risks of both health and social issues. Participants in this study, recruited through self-selection, were seeking routine preventative medical evaluation. Individuals answered a questionnaire that targeted topics such as sexual abuse, physical abuse,

neglect, lack of support within the family, death of a parent, witnessing domestic violence, substance abuse, or incarceration of a family member. The study found that “adverse childhood experiences” (ACEs) could be sorted into ten categories consisting of household dysfunction, abuse, and neglect, creating an ACE score. Denoted by the number of categories an individual experiences in the first 18 years of life, the retrospective ACE score is determined on a scale between 0-10.

By sampling 9,508 individuals, boasting a 70.5% response rate, researchers identified a link between early adversities and later life risks (Felitti et al., 1998). In the original ACE study, findings revealed that those who experienced at least four or more adverse childhood experiences had 50 or more sexual partners, poorer self-rated health, greater likelihood of sexually transmitted diseases, increased risk for drug abuse and alcoholism, depressive symptoms, suicide attempts, and severe obesity (Felitti et al., 1998). In a second wave sample with 17,421 participants, retrospective reports of ACEs revealed an association between adult health risk behaviors and non-infectious causes of disease such as respiratory illness, cancer, and heart disease (Felitti et al., 1998). Other studies have found ACE scores are correlated to chronic obstructive pulmonary disease (COPD) (Anda et al., 2008), ischemic heart disease (Brown et al., 2010), lung cancer (Brown et al., 2010), and liver disease (Dong et al., 2003). Studies have determined that higher ACE scores present greater likelihood for risks such as drug use, sexual risks, teenage pregnancy, obesity, depressive symptoms, suicide ideation, suicide attempts, substance abuse, hallucinations, and numerous types of cancer (Brown et al., 2009, Dube et al., 2001, Holman et al., 2016).

Studies implementing the ACE scale typically utilize the original ten items included in the measure. While the scale has been widely praised, many researchers present strong evidence

that there are other common childhood adversities missing from the 10-item measure. Additional research has demonstrated that children growing up in violent communities have a variety of behavioral and mental health problems (Gorman-Smith & Tolan, 1998). Other common adversities during childhood include bullying, peer victimization, and poverty, which can lead to a series of adjustment challenges. Poverty has been shown to have multiple effects on development leading to physical and mental health consequences in adulthood, such as neonatal and post-neonatal mortality rates, greater risk of injuries resulting from accidents, physical abuse, neglect, heightened risk for asthma, and lower developmental scores in a range of tests at multiple ages (Aber, Bennett, Conley & Li, 1997). Cross-sectional studies and short-term longitudinal studies during childhood have suggested that victimization may be a marker of both present and future psychopathology. Previous cross-sectional studies (Arseneault, Bowes et al. 2010) and retrospective studies spanning into adulthood (Lund, Nielsen et al. 2009) have revealed the presence of psychosomatic, physical, and mental health problems in victimized children. When considering additional negative life events in congruence with the original ACE items, it is evident that there are many factors that can influence later life outcomes.

Adult Adjustment and Psychopathology

Many studies have assessed the effects of childhood trauma exposures (i.e. abuse and household dysfunction), and findings suggest that childhood adversities may pose deleterious consequences on adult mental health. Findings from Chapman et al. (2004) provided evidence for a strong graded relationship between the amount of trauma exposures and lifetime depressive disorder among women and men. In a retrospective cohort study of 9,460 adults, subjects completed a survey analyzing a series of health concerns. The survey included a standardized assessment of lifetime and recent depressive disorders, childhood abuse and household

dysfunction. Implementing the ACE scale, researchers in this study revealed an overall lifetime prevalence of depressive disorders as 23% (women, 28.9%; men, 19.4%). According to their findings, exposure to ACEs are associated with increased risk of depressive disorders up to decades following their occurrence (Chapman et al., 2004).

Adverse events and traumas in childhood have been linked to increased risk of suicide and anxiety symptoms in adult populations (Dube et al., 2001; Sareen et al., 2013). Childhood adversities are a known risk for Post-Traumatic Stress Disorder (PTSD) following trauma exposures (McLaughlin et al., 2017). Symptoms of PTSD can include nightmares or unwanted avoidance of situations that bring back memories of the trauma, memories of the trauma, anxiety, heightened reactions, or depressed mood. One study by McLaughlin and colleagues (2017) analyzed epidemiological data from World Mental Health surveys. Analyzing a sample of 27,107 individuals, McLaughlin et al. (2017) examined the variation in associations of childhood adversities with PTSD according to type of adversity and life-course stage. In their sample, physical abuse, sexual abuse, neglect, and parent psychopathology were the strongest predictors of PTSD. The strongest associations between childhood adversities and PTSD were identified in the early and middle adulthood period; later adulthood yielded weaker associations. (McLaughlin et al., 2017).

Resilience

Children may be subjected to early adversity, placing them at higher risk for developing psychological and emotional difficulties that could last into adulthood. Despite the increased risk for psychopathology, however, a substantial number of emerging adults exhibit resilient functioning following negative life events during childhood. Current conceptualizations of resilience follow a multisystemic and dynamic framework explaining how individuals adapt to

negative experiences, trauma, or adversity (Masten, 2011; Masten & Narayan, 2012). Resilience is often divided into domains that reflect the dimension of adaptation. Examples of these domains include personal competence, trust in one's instincts, positive acceptance of change, religiosity, secure relationships, etc. (Howell & Miller-Graff, 2014).

There has been significant empirical research on resilience, specifically in children exposed to violence. However, there are relatively few studies examining resilience in adulthood, and even fewer studies focused on emerging adults. One longitudinal study considered emerging adults with a history of childhood adversity found that individuals who ranked in the top quartile on resilience evaluations in childhood had lower rates of internalizing and externalizing behavior problems (Fergusson & Horwood, 2003). Interventions promoting resilience during emerging adulthood could enable individuals to develop healthy adjustment patterns during a phase in which developing high-risk patterns of behavior is relatively typical (Smith et al., 2011).

Kaloeti, et al. (2019) retrospectively examined emerging adults' early adversities. They explored the relationship between adverse experiences during childhood, psychological distress, resilience, and depressive symptoms in Indonesian undergraduate students. Specifically, researchers examined whether resilience mediated the association between childhood adversity experiences, psychological distress, and depressive symptoms. With a sample of 443 university students in Indonesia, participants in this study completed the Adverse Childhood Experiences (ACEs) Questionnaire, General Health Questionnaire-12 (GHQ-12), Connor-Davidson Resilience Scale (CD-RISC), and Beck Depression Inventory-II (BDI-II) (Kaloeti et al., 2019). Participants' ages ranged from 17 to 21 years. Findings determined that resilience partially mediated the association between adolescents' psychological distress and depressive symptoms. Results from this study pinpoint the importance of promoting resilience for those that have

experienced negative life events during childhood. Furthermore, adolescents can adapt in stressful contexts, thereby buffering the effect of negative emotional experiences (Kaloeti, et al., 2019). Findings indicate that promoting resilience could mitigate maladaptation after trauma exposure into emerging adulthood.

Social Support

Characteristics of an individual's relationships and functioning that reduce the likelihood of maladaptive behaviors or promote resilience are referred to as protective factors (Ladd & Burgess, 2001). Protective factors, such as social support, tend to buffer negative events and are associated with positive life outcomes. The Centers for Disease Control and Prevention (Centers for Disease Control & Prevention, 2019) established safe, secure, and nurturing relationships (SSNRs) as a fundamental element of child development, specifically in the prevention of adverse childhood experiences. Based on empirical evidence, the CDC has stressed the importance of SSNRs' ability to make children feel secure throughout development. Social relationships are critical to social, behavioral, emotional, and brain development (Centers for Disease Control & Prevention, 2019). Social relationships are crucial during childhood yet impacts of healthy social relationships are evident across the lifespan.

Research indicates that social support in the form of relational emotional supports is a protective factor against internalizing symptoms (Tennant, 2002). A study conducted in 2017 assessed protective factors related to depressive symptoms among American Indian and Caucasian older adults (Burnette et al., 2017). Utilizing a sample of 491 older adults (aged 50 years or older), researchers hypothesized that higher levels of adult social support would be associated with lower levels of depressive symptoms for older adults. Utilizing self-administered questionnaires, such as the Multidimensional Scale of Perceived Social Support (MSPSS)

(Zimet, Dahlem, Zimet & Farley, 1988), results indicated that higher levels of adult social support were associated with lower levels of depressive symptoms. Findings concluded that a lack of social support may be a risk factor for depressive symptoms (Burnette et al, 2017).

The Current Study

This project examined the effects of resilience and social support on the link between adverse childhood experiences and adult adjustment in emerging adults. We predicted that: (a) adverse childhood experiences would have a positive association with adult adjustment (depression, anxiety, stress, and trauma symptoms) in emerging adults; (b) level of perceived social support would be negatively associated with adult adjustment (depression, anxiety, stress, and trauma symptoms) in emerging adults; and (c) level of resilience would be negatively associated with adult adjustment (depression, anxiety, stress, and trauma symptoms) in emerging adults. Lastly, we explored the moderating effects of resilience and social support on the link between adverse childhood experiences and adult adjustment.

CHAPTER II

METHODOLOGY

Participants

We recruited a sample of 200 participants, and 194 participants fulfilled the study requirements and were included in analyses. Participants completed the online survey using Qualtrics software through the Psychology Department subject pool (SONA). Of the participants, 158 were female (81.4%). The average age of participants was 19.6 years with a range of 18 to 24 years. Most of the participants reported their ethnicity as White (75.3% White, 6.2% American Indian or Alaska Native, 1.5% Asian, 5.2% Biracial, 5.7% Black or African American, 4.6% Hispanic/Latinx, 1.0% Other). Furthermore, the participants in this study were predominantly college freshmen (40.6%) or sophomores (23.9%). Fifty-two percent of the participants reported an annual income (including parental support if they received it) of \$10,000 or less. Oklahoma and Texas were the most common states of permanent residence.

Measures

Demographic Questionnaire

Participants in the study completed a demographics questionnaire that assessed their age, year in college, ethnicity, yearly income (what they earned individually in addition to any support they receive from family), marital status, sex, highest level of education for parents/guardians, and state of their permanent residence.

Adverse Childhood Experiences Scale -Revised (ACEs-R)

The Adverse Childhood Experiences (ACEs-R) Scale-Revised (Finkelhor, Shattuck, Turner, & Hamby, 2015) is a 14-item questionnaire assessing adverse experiences during childhood. The first 10-items are identical to the original ACEs scale (Felitti et al., 1998). Five of

the scale items are concerned with child maltreatment: physical abuse, psychological abuse, sexual abuse, physical neglect, and emotional neglect taking place between birth to 18 years of age. Other ACEs include household challenges such as: mother treated violently, household mental illness, incarcerated family members, parental separation or divorce, and household substance abuse. Additional victimization and adversity items were added to create a revised ACEs scale. One item analyzes low socioeconomic status, asking the question, “Was there a period of 2 or more years when your family was very poor or on public assistance?” One question was added to assess peer victimization, “Did other kids, including brothers or sisters, often or very often hit you, threaten you, pick on you, or insult you?” Peer rejection and isolation were evaluated by asking, “Did you often or very often feel lonely, rejected, or that nobody liked you?” The last item added to the revised ACEs scale assesses whether an individual was exposed to community violence during childhood. Specifically, the question states, “Did you live for 2 or more years in a neighborhood that was dangerous or where you saw people being assaulted?” Each ACEs item endorsed with a “yes” response receives a code of 1 for the variable. The total of “yes” responses are totaled to determine an overall ACE score. Several of the abuse items on the ACEs scale come from the Juvenile Victimization Questionnaire which has a strong internal reliability ($\alpha = .80$) (Finkelhor, Hamby, Ormrod, & Turner, 2005). The four additional items were modified from a variety of sources and have not been validated elsewhere. Internal consistency was comparable for our sample ($\alpha = .760$). The ACES-R total score was used as our measure of trauma exposure.

Depression Anxiety Stress Scale (DASS-21)

The 21-item Depression Anxiety Stress Scale (DASS-21) (Lovibond & Lovibond, 1995) is a self-report scale of depression, anxiety, and stress. This is a shortened version of the

DASS—42 and has strong internal consistency (Cronbach's $\alpha > .85$) for each of the subscales (Sinclair et al., 2012). Individuals' responses are given on a 4-point Likert scale, ranging from 0 ("*I strongly disagree*") to 3 ("*I totally agree*"). Ranges of scores correspond to levels of symptoms, ranging from "normal" to "extremely severe." Scores for depression, anxiety and stress are calculated by summing the scores for each item and multiplying the total by 2. Scores range from 0-42. Internal consistency was strong (Cronbach's $\alpha = .95$) for our sample. The Depression, Anxiety and Stress scores were used as indices of emerging adult adjustment.

PTSD Checklist for DSM-5 (PCL-5)

The Post-Traumatic Stress Disorder Scale for DSM-5 (PCL-5) (Weathers et al, 2013) is a 20-item self-report measure of trauma symptoms. This measure contains 20 items which are rated on a subjective frequency scale of 0 ("*Not at all*") to 4 ("*Extremely*") and pertains to symptoms over the past month. Items are summed to provide the total severity score; total severity score range from 0-80. The PCL-5 has strong internal consistency ($\alpha = .95$) (Blevins et al., 2015). Within this sample, the internal consistency was comparably strong ($\alpha = .957$). The PCL-5 Total score was used as an index of emerging adult adjustment.

Connor-Davidson Resilience Scale (CD-RISC-25)

The Connor-Davidson Resilience Scale (CD-RISC-25) (Connor et al., 2003) assesses resilience. The CD-RISC contains 25-items which are rated from 0-4 on the following scale: not true at all (0), rarely true (1), sometimes true (2), often true (3), and nearly all of the time (4). Individual responses for the CD-RISC are based on how the subject has felt during the past month. Total scores range from 0-100, with elevated scores reflecting greater resilience. The internal consistency for the CD-RISC-25 is strong ($\alpha = 0.89$), and within this sample internal

consistency was comparable ($\alpha = .949$). The CD-RISC-25 Total score was used as our measure of resilience.

Multidimensional Scale of Perceived Social Support (MSPSS)

The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet & Farley, 1988) is a 12-item scale that measures perceived support from three sources: family, significant other, and friends. Individuals indicate their agreement with the 7-point Likert scale for each item. The scale ranges from very strongly disagree (1) to very strongly agree (7), with higher scores implicating greater levels of perceived social support. Scoring for each subscale is summed for each item and divided by 4. Mean scale scores ranging from 1 to 2.9 are considered low support; scores of 3 to 5 are considered moderate support; scores from 5.1 to 7 are considered high support. Good internal consistency has been reported for the Family subscale as ($\alpha = 0.91$) (Canty-Mitchell & Zimet, 2000). In this sample, the Family subscale internal consistency was strong ($\alpha = .943$). The MSPSS Family score was used as our measure of social support.

Procedure

The Institutional Review Board (IRB) at Oklahoma State University approved the study. Each measure was uploaded to Qualtrics survey software. The measures were digitally formatted identically to the paper forms to maintain similarity. Participants were recruited via the Psychology Department subject pool (SONA). To advertise the study, emails were sent to Introductory Psychology professors to share with the students, as well as listed on the SONA website.

Students that signed up to participate in the study could access the survey immediately. From the SONA website, students were directed to the Qualtrics survey. The first screen visible

to students was a consent form. If a participant did not agree to participate, the survey would end immediately. Participants completed 6 questionnaires in this order: demographics questionnaire Adverse Childhood Experiences Survey-Revised (ACES-R), the Depression Anxiety Stress Scale (DASS-21), the PTSD Checklist for DSM-5 (PCL-5), Connor-Davidson Resilience Scale (CD-RISC), the Multidimensional Scale of Perceived Social Support (MSPSS). When the questionnaires were completed participants were shown an information screen reiterating the purpose of the study, confidentiality, a list of supports in case the survey were distressing for participants, and contact information for primary researchers on the project. For completion of the study, participants were granted 0.5 research participation credits through the Psychology Department subject pool (SONA). Many faculty members require research participation credits to fulfill course-related expectations or grant extra credit to students participating in research.

CHAPTER III

RESULTS

Means and standard deviations are presented in Table 1. When examining the distribution of scores, many of our participants were relatively well-adjusted and had lower levels of trauma exposure. The most frequently endorsed ACEs were emotional abuse (31.0%), parental divorce or death (42.8%), mental illness of family member or attempt or die by suicide (36.1%), and peer rejection or isolation (42.8%). See Table 2 for ACES-Revised frequencies. ACES-Revised scores are interpreted out of a total of 14 and scores in our sample ranged from 0 to 10 ($M=3.06$) with 63% endorsing 0-2 events and 37% endorsing 3 or more events. A similar pattern was evident in our four indices of adult adjustment. DASS-Depression scores ranged from 0 to 42 with the 65% in the normal to mild range ($M=11.75$) and only 35% in the moderate to extremely range. DASS-Anxiety scores ranged from 0 to 42 with 57% in the normal to mild range ($M=9.02$) and 43% in the moderate to severe range. DASS-Stress scores ranged from 0 to 40 with 61% in the normal to mild range ($M=14.53$) and 29% in the moderate to extremely severe range. PCL-5 scores ranged from 0 to 76 ($M=24.88$) with 60% below the recommended cutoff of 31, and 40% in the clinical range. MSSPS-Fam scores ranged from 1 to 7 with 9% in the low range, 44% in the moderate range, and 48% in the high range ($M=5.22$).

Perceived levels of family support levels were relatively low ($M=1.70$).

Pearson product-moment correlations are presented in Table 1. Adverse childhood experiences were positively associated with adult adjustment (depression, anxiety, stress, and trauma symptoms). Perceived social support was negatively associated with adult adjustment (depression, anxiety, stress, and trauma symptoms). Levels of resilience were negatively

associated with adult adjustment (depression, anxiety, stress, and trauma symptoms). These findings supported our initial hypotheses.

Table 1
Bivariate Correlations, Means, Standard Deviations

	1	2	3	4	5	6	7
1. ACEs-R		.439**	.362**	.419**	-.203**	.417**	-.436**
2. DASS- Depression			-.704**	.752**	-.405**	.659**	-.334**
3. DASS-Anxiety				.750**	-.217**	.627**	-.227**
4. DASS-Stress					-.272**	.710**	-.268**
5. CD-RISC Resilience						-.316**	.492**
6. PCL-5 PTSD Symptoms							-.348**
7. MSPSS- Family							
<i>M</i>	3.06	11.75	9.02	14.53	67.31	24.88	5.22
<i>SD</i>	2.71	10.88	8.77	10.35	18.72	19.30	1.70

*ACEs-R (Adverse Childhood Experiences Scale-Revised), DASS-21 (Depression, Anxiety, and Stress Scale), PCL-5 (The Posttraumatic Stress Disorder Checklist for DSM-5), CD-RISC (The Connor-Davidson Resilience Scale), MSPSS (Multidimensional Scale of Perceived Social Support). Note: **p < .01*

Table 2
Frequencies of ACEs-R by domain

ACE Type	Frequency (N=194)
Emotional abuse	60
Physical abuse	29
Sexual abuse	15
Emotional neglect	52
Physical neglect	8
Parental divorce or death	83
Witnessing domestic violence	19
Household substance abuse	55
Mental illness of family member attempt or die by suicide	70
Incarcerated household member	13
Peer victimization	51
Peer rejection/isolation	83
Community violence	15
Poverty	40

To examine whether perceived social support and resilience moderated the link between adverse childhood experiences and adult adjustment, separate moderation analyses using Bootstrapping with 5,000 resamples was utilized (Hayes, 2018). The overall model for resilience as a moderator on the link between adverse childhood experiences and depression symptoms was significant, $R^2 = .299$, $F(3, 189) = 36.824$, $p < .001$. There was no significant interaction effect. When analyzing the link between adverse childhood experiences and anxiety, with resilience as the proposed moderator, the model was not significant and there was no significant interaction effect. This was also the case for examining moderating effects of resilience on the link between adverse childhood experiences and stress symptoms; the model was insignificant and there was no significant interaction effect. The overall model for resilience as a moderator on the link between adverse childhood experiences and trauma symptoms was significant $R^2 = .275$ $F(3,190) = , p < .001$. There was no significant interaction effect.

The overall model for social support as a moderator on the link between adverse childhood experiences and depression symptoms was significant, $R^2 = .2314$, $F(3, 189) = 18.969$, $p < .001$. There was no significant interaction effect. The overall model for perceived social support as a moderator on the link between adverse childhood experiences and trauma symptoms was significant $R^2 = .248$, $F(3,190) = , p < .001$. There was no significant interaction effect. When analyzing the link between adverse childhood experiences and anxiety, with perceived social support as the proposed moderator, the model was not significant and there was no significant interaction effect. This was also the case for examining moderating effects of perceived social support on the link between adverse childhood experiences and stress symptoms; the model was not significant and there was no significant interaction effect.

Table 4

Multiple Regression Model Results Involving Adverse Childhood Experiences, Resilience, Perceived Social Support and Emerging Adult Adjustment

Variables	<i>B</i>	<i>SE</i>	<i>df</i>	<i>F</i>	<i>R</i> ²
Depression Symptoms			3	26.82**	0.30
ACEs-R	1.86*	0.91			
Resilience	-0.178**	0.05			
ACEs-R X Resilience	-0.01	0.01			
Trauma Symptoms			3	24.03**	0.52
ACEs-R	4.37*	1.64			
Resilience	-0.18*	0.92			
ACEs-R X Resilience	-0.02	0.02			
Depression Symptoms			3	18.97**	0.23
ACEs-R	.05	0.82			
MSPSS-Family	-2.01*	0.66			
ACEs-R X MSPSS-Family	.29	0.16			
Trauma Symptoms			3	20.88**	0.25
ACEs-R	3.63*	1.44			
MSPSS-Family	-1.50	1.16			
ACEs-R X MSPSS-Family	-0.17	0.28			

Notes. * $p < .05$, ** $p < .001$.

CHAPTER IV

DISCUSSION

This study examined four different indices of adult adjustment in emerging adults, as well as the effects of resilience and perceived social support on the link between adverse childhood experiences and depression, anxiety, and stress symptoms, and trauma symptoms. Consistent with previous research, levels of resilience were negatively associated with all four indices of adult adjustment (depression symptoms, anxiety, and stress trauma symptoms,). Also replicating previous research, adverse childhood experiences and perceived social support were positively associated with adult adjustment (depression symptoms, anxiety, and stress, and trauma symptoms). This supports the critical role that understanding trauma history and potential protective factors in understanding emerging adult adjustment.

We found evidence of moderation of adverse childhood experiences and emerging adult adjustment (depression symptoms and trauma symptoms) by perceived social support and resilience. There was no moderation, however, with anxiety and stress symptoms. Our findings of moderation by resilience and social support mirror the findings from other studies centered on protective factors and outcomes following early adversity. For example, Kaloeti, et al. (2019) concluded that protective factors such as resilience could mitigate maladaptation after trauma exposure in emerging adults. Adverse childhood experiences are a significant risk factor for a host of poor outcomes such as: anxiety, depression, suicide and self-harm, and numerous health-related issues (Felitti et al., 1998), thus continued research on protective factors (i.e. social support) could greatly contribute to better adjustment.

As has been well-established, adverse childhood experiences can have negative ramifications into emerging adulthood. Examining adult adjustment during emerging adulthood

is particularly important due to the increasing rates of stress, anxiety, and depression that coincide with this developmental period (Beiter et al., 2015). However, implications from our results include the need to delineate between the types adversity in respect to varied types of adjustment. For example, childhood adversities such as physical and sexual abuse, neglect and parent psychopathology are associated with elevated risk of developing PTSD following a traumatic event (McLaughlin et al., 2017). We know that relatively mild stressors are more likely to trigger psychopathology among those with a history of childhood adversity than those without, thus, associations of childhood adversities and psychopathology may vary by life-course stage and later stressors. While early adversities produce generalized vulnerabilities to maladjustment, documenting childhood adversities in respect to protective factors, current stressors, life-stage, and trauma type may provide better context for understanding emerging adult adjustment.

This study should be interpreted with consideration of several strengths and limitations. Limitations of the study include characteristics of our sample: high levels of education, predominantly Caucasian ethnicity, and low levels of adverse experiences. Thus, these results may not generalize to samples with more diverse socioeconomic levels and ethnicities. Recruiting a more diverse sample may provide a clearer picture of the impact adverse childhood experiences may have on emerging adult adjustment. Additionally, retrospective self-report measures of early childhood experiences may not fully represent the actual adversities that occurred in years prior. For example, adult recall of events early in childhood may be less accurate than data collected throughout childhood. Alternatively, self-reports may be embellished, respondents may feel uncomfortable revealing private details, and may respond in a socially desirable manner. Lastly only self-report measures were used in this study and thus method variance may have affected results.

Strengths of the study include the use of standardized questionnaires with high reliability and validity. High levels of reliability and validity from our measures strengthen the inferences which can be made from the results of the study. Furthermore, ACES-Revised was a more comprehensive measure of childhood trauma including four additional early adverse experiences, allowing for a broadened scope of past stressors. Inclusion of multiple indices of adult adjustment provided insight into multiple pathways in which maladjustment can occur. Utilizing bootstrapping analysis to examine moderation effects provided a more sensitive approach and heightened our ability to detect significant results. Additionally, examining a specific developmental period which has less often been studied, such as emerging adulthood, contributes to our understanding of the impacts of childhood adversity and adjustment following past traumas. Much of the research on early adversity focuses on childhood or retrospective reports during later adulthood. While it is important to study adjustment at all ages, investing emerging adults may be particularly important and underrepresented in the research.

This study highlights several directions for future research. Chiefly, it is important to replicate studies implementing different age groups, reporters, and methods to evaluate consistency. Likewise, including larger samples with more diverse ethnic backgrounds may take into consideration additional factors that may contribute to the variables being evaluated in our study (i.e. trauma exposure, resilience, social support, and adjustment). A larger and more diverse sample would test whether findings would be more generalizable to larger populations. Future research aims include longitudinal studies to investigate whether findings of the current study are replicated throughout different developmental periods. Ideally, future research will implement numerous additional measures of adjustment and traumatic experiences to fully represent the past and present experiences in emerging adults.

In conclusion, research of this nature may be helpful in developing trauma-informed interventions and practices for individuals that have faced early adversities. Emerging adulthood is a developmental turning point characterized by a variety of life choices, and consequences of such choices may persist throughout the lifespan. Findings from this study highlight the importance of developing treatment and intervention plans designed to improve resilience during the transition to adulthood. Interventions that enhance social support, specifically from a family member, may buffer against maladjustment (i.e. depression and trauma symptoms) in emerging adults. This study focused on emerging adulthood to further investigate gaps in current literature on this age range. However, further research should continue to examine the role of protective factors to buffer against adverse childhood experiences and promote increased adjustment in emerging adulthood.

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