Early Traumatic Experiences: How Individual Events Associate with Quality of Life Outcomes

Ray He, Arianna Brangman, Nick Brdar, Lynsey Randolph, Shelby Wilson, and Chasey Lake

Department of Psychology, University of Michigan

ABSTRACT

Early traumatic experiences are prevalent and can have a negative impact on various aspects of life outcomes later in adulthood. This study examines adverse childhood experiences (ACEs), a crucial subset of childhood adversities, and how ACEs impact quality of life (QoL). In the present study, we investigated the extent to which an increased occurrence of ACEs affected mental health, physical health, and socioeconomic status later in adulthood as substantial life outcome factors to determine QoL. We also examined the age difference in the occurrence of ACEs and the gender difference in the correlation between ACEs and mental health conditions as a moderator. Participants (N = 193) completed an online survey consisting of demographic identity questions and previously supported scales measuring these variables. A negative and significant correlation was achieved in the tests assessing the relationship between ACEs and mental health, physical health, as well as socioeconomic status, respectively. Furthermore, we found that age was not significantly associated with childhood trauma, and the moderator effect of gender was not significant either. Findings indicated that ACEs processed roles in eroding QoL in late adulthood and highlighted that addressing early adversity is an effective strategy toward reducing preventable health problems.

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Adverse Childhood Experiences (ACEs) are a subset of childhood adversities. In the United States, an alarming number of youths reported that they had experienced some form of ACEs (e.g., physical abuse, sexual abuse, emotional abuse, or neglect; Davis et al., 2021). Recent data collected in 2015 presented that 61% of youth (prior to the age of 18) reported experiencing at least one form of direct violence in the past year, including any violence exposure such as adverse childhood experiences, assault, violent crime, witnessing violence, with nearly 41% reporting more than one event (Finkelhor et al., 2015). Many studies have investigated how ACEs were significantly associated with quality of life (QoL), the general and overarching concepts of health (Vederhus et al., 2021), and found that ACEs influenced various aspects of life outcomes later in adulthood, including mental health, physical health, and socioeconomic status (SES; Campbell et al., 2019).

Childhood adversities are prevalent, and the association between these experiences and worse QoL in terms of poor life outcomes has been repeatedly confirmed (Vederhus et al., 2021). Broadly, research focused on the association between ACEs and mental health problems proposed that mental health levels were less favorable in those students who had been exposed to more psychosocial adversities (Leiva et al., 2021). A study done by Leeb and Colleagues (2011) found that the impact of ACEs was not limited to childhood; they had a lasting influence on injury and physical functioning well into adulthood. Similarly, Mosley-Johnson and Colleagues' study indicated that people who report a history of ACEs are more likely to have chronic diseases and suffer from poor physical health later in life (2021). Others have noted that various

adversities and their long-term effects have become the life context of many adults. Young adults exposed to adversities in childhood resulted in lower socioeconomic status later in life compared to those with no adverse childhood experiences (Borja et al., 2019). Demographic identities such as age and gender also show differences in ACEs and quality of life. It is widely recognized that ACEs differ among age groups, and a high ACE score is positively correlated with higher odds of physical and mental health problems (Riedl et al., 2020). In addition to the age difference, the significance of gender differences as a moderator of ACEs and mental health is commonly reported. An analysis conducted by Vederhus and colleagues showed that women were more likely to screen positive for depression, and a significant interaction between early childhood trauma and mental health was found (2021). These prior studies provided an overview of the association between the experience of childhood adversities and poor life outcomes. They also predicted various possible consequences for young adults who had early childhood trauma. And these research results underscore the importance of considering demographic identity and childhood trauma in mental health and physical health interventions.

The majority of the studies offered evidence that the risk of developing poor life outcomes in terms of mental and physical health problems as well as SES was significantly linked to the history of suffering from ACEs. Past research has studied the relationship between ACEs and health outcomes in adulthood, but it was limited in examining general ACEs without specifying the types of maladaptive childhood experiences (Vederhus et al., 2021). Additionally, many present studies examined the correlation between ACEs and retrospective mental or physical health problems but did not account for current health outcomes or present illness (Espeleta et al., 2018). Therefore, the following study sought to expand the research and establish an association among adults between the experience of traumatic events in early

childhood and mental health, physical health outcomes, and SES later in life. The study hypothesized that participants who reported more ACEs would be more likely to report maladaptive mental health problems such as depression and anxiety, poor physical health outcomes such as bodily pain, and lower SES. The two specific types of ACEs, sexual and physical trauma, could predict the severity of physical health problems later in adulthood. Further, the study expected that older people would experience more early traumatic events, and the female would report a significant negative association between childhood trauma and mental health conditions while the male did not.

Method

Participants

The sample for this study included one hundred ninety three (n = 193) participants. The ideal sample size was n = 230, but 38 responses were eliminated due to the participants' failure to complete a majority of the survey from the initial survey collection of n = 231. To participate, individuals must meet the criteria for being at least eighteen years of age. The participants' age ranged from 19 to 69 (M = 35.26, SD = 10.27), and 108 (56.0%) identified as male, and 85 (44.0%) identified as female. The racial identity of the participants consisted of 137 (70.3%) identifying as White, 32 (16.8%) identifying as Asian, 10 (5.0%) identifying as Black, 7 (4.0%) identifying as Hispanic, 4 (2.0%) identifying as multiracial, and 3 (2.0%) identifying as Native American. The reported sexuality of participants consisted of 149 (77.6%) identifying as straight, 35 (18.2%) identifying as bisexual, 4 (2.1%) identifying as gay, 1 (1.0%) identifying as lesbian, and 1 (1.0%) identifying undisclosed.

Measures

Early Traumatic Experiences

Amended Adverse Childhood Experiences Questionnaire. The Amended Adverse Childhood Experiences Questionnaire is a 16-item self-report measure of early traumatic experience that asks participants to identify whether or not they experienced each of a list of 16 adverse childhood experiences (Tranter, Brooks, & Khan, 2021). See Appendix A for the full measure. Each of the 16 items is scored as 0 (no) or 1 (yes), for a maximum possible score of 16. The maximum score of 16 demonstrates a highly traumatic childhood while a score of 0 demonstrates a minimally traumatic childhood (Tranter et al., 2021). Scores ranging from 1-15 reflect differing degrees of less or more traumatic childhoods without specific ranges (Tranter et al., 2021). This scale has good internal reliability with coefficient $\alpha = .82$ in a general population sample of individuals over the age of 18. Further, this scale is negatively correlated ($r = -.73$) with the Primary Care PTSD Screen, showing strong divergent validity (Tranter et al., 2021).

Mental Health

Mental Health Inventory (MHI). The MHI is a 38-item self-reported measure of psychological distress and wellbeing (Veit and Ware, 1983). The questionnaire is broken down into 5 subcategories: anxiety, depression, loss of behavior/emotional control, general positive affect, and emotional ties. Each category has a varying number of questions, and the questions utilize a combination of Likert-type scales and semantic differential scales with 6 potential responses per question. All the items in the inventory are positively scored, so some of the question responses are reversed when performing statistical analysis to ensure that a higher score indicates a higher level of mental health and wellness. There is a maximum score of 228 on the MHI. See Appendix B for full measure. The MHI shows a strong internal reliability with Cronbach's alpha ranging from .83 to .96 between different subcategories on the scale. Discriminant validity was displayed between the measures on the MHI and measures of physical

health (Veit and Ware, 1983). Lastly, the test-retest reliability of the MHI is also satisfactory, with r-values ranging from .56 to .64 (Veit and Ware, 1983).

Physical Health

RAND-36. The RAND 36-Item Short Form Survey Instrument (RAND-36) is a publicly available version of the 36-Item Short Form Survey Instrument (SF-36; Hays et al., 1993). The RAND-36 is a 36-item self-report measure of health-related quality of life that consists of 8 different scales : 1) physical functioning; 2) bodily pain; 3) role limitations due to physical health problems; 4) role limitations due to personal or emotional problems; 5) general mental health; 6) social functioning; 7) energy/fatigue or vitality; and 8) general health perceptions (Ware & Sherbourne, 1992). The RAND-36 uses a combination of Likert-type scales and forced-choice-type scales. Individual item scores are standardized with a scoring algorithm to create a total score with a range of 0 to 100 for each scale (Laucis et al., 2015). Total scores can be used to categorize participants by health status using the following ranges: below 50 (lower score represents worse health condition); above 50 (higher score represents better health condition; Laucis et al., 2015). The cutoff score for a normative mean value for each scale is 50 (Laucis et al., 2015).

The RAND-36 is positively correlated with the original SF-36 ($r = 0.99$) demonstrating strong convergent validity (Hays et al., 1993). In addition, the RAND-36 also has a significant Cronbach's alpha reliability with Health-Related Quality of Life ($\alpha > 0.7$) in chronic grout (Terkeltaub, 2012). In our study, we are going to modify RAND-36 and narrow it down to a 21-item short form survey. We are interested in how ACEs correlate with mental health and physical health, respectively. Therefore, we plan to use a separate measure for mental health variables and discard the role limitations due to personal or emotional problems scale,

energy/fatigue or vitality scale, and general mental health scale within the RAND-36. In addition, we plan to use a separate measure to figure out the association between ACEs and intrapersonal relationships, and we will discard the social functioning scale. See Appendix C for the full measure.

Socioeconomic Status

Modified Family Resource Scale. The Modified Family Resource Scale (Ompad et al., 2012) is a 18 item self report scale that asks participants to rate how often certain needs were met ranging from a 0 (never) to 5 (always). This scale was derived from the original 30 item scale known as the Family Resource Scale where some items were left out because they focused on the participant's ability to provide certain resources to their children, but not every participant will have children so this would skew the results. Other items were left out to focus on material resources in order to determine someone's socioeconomic status. For this study, the item "Time to get enough sleep/rest" was removed due to its minimal correlation with SES, and the item "Public Assistance" had an added option to choose not applicable. After participants complete the 17 items of our Modified Family Resource Scale, a sum score is then created ranging from 0, never enough resources for all items, to 5, always enough resources for all items. The range of possible total scores was 0 to 85, with an 85 indicating higher SES.

In the original study the scale was used, researchers found that the scale had high internal reliability after they calculated Cronbach's alpha which was 0.91 (Ompad et al., 2012). They also found that the scale has good criterion validity when they observed that those who reported their main source of income was from employment as compared to public assistance were more likely to have more material resources. They finally also found that the scale has good construct validity as it pertains to drug users where they were able to determine that current drug users had

less resources than former drug users. See Appendix D for full measure.

Procedures

The survey was administered in online format using Qualtrics and the participant recruitment process utilized convenience and snowball sampling in order to achieve our desired participant goal. First, we posted the Qualtrics link to the Amazon MTurk service website and then sent individual messages to friends, family, and peers which contained the link as well as requested it to be shared to others who may be interested. Upon opening the link, participants were prompted with the following: "You are invited to participate in a research study. This form contains information that will help you decide whether to join the study. Taking part in this research project is voluntary. You do not have to participate and you can stop at any time. Please take time to read this entire form and ask questions before deciding whether to take part in this research project." See Appendix E for the full informed consent. Once informed consent is given, participants completed the following in order: demographic items (See Appendix F for the full measure), SES items, physical health items, mental health items, and ACE items. The online survey concluded with thanking the participants, debriefing the goals of the study, and citing relevant mental health resources.

Results

A correlation coefficient between childhood trauma and current mental health was run to determine if a relationship between them existed. It was hypothesized that there would be a negative correlation between the two variables, such that as the trauma increased, the mental health would decrease. The results of the correlation did indicate that there was indeed a negative correlation between trauma and mental health scores, $r(192) = -.378$, $p < .001$. Therefore, we concluded that people who experienced more adverse childhood events often experienced poorer

mental health in adulthood. Figure 1 summarizes the negative correlation between childhood trauma and mental health.

A correlation coefficient was calculated to determine if increases in the occurrence of traumatic childhood events were negatively associated with physical health and functioning. It was hypothesized that as the number of events of childhood trauma increased in an individual's life, positively reflected in an individual's ACE score, their physical health and functioning would decline, while those with lower ACE scores would have comparatively better physical health. The study result indicated a negative correlation between the occurrence of adverse childhood experience and physical well-being functions, $r(191) = -.44$, $p < .001$. Thus, the hypothesis was supported that participants with increased adverse childhood experiences often have more limitations in physical functioning.

A linear regression was calculated to determine if increases in the occurrence of traumatic childhood events were negatively associated with physical health. It was hypothesized that increases in childhood physical trauma and childhood sexual trauma would be positively associated with an increase in physical health concerns. The results of the regression indicated the two predictors of physical trauma and sexual trauma explained 14.3% of the variance in physical health (R^2=.143, $F(2, 186) = 15.533$, $p < .001$). Individual predictor variable results indicate that physical trauma does not significantly predict physical health ($\beta = -.133$, $p = .088$) but sexual trauma was a significant predictor for physical health ($\beta = -.295$, $p < .001$).

In order to determine if there is a relationship between an individual's reported childhood trauma as measured by their ACE score, and their projected life outcome measured by their SES status, a correlation coefficient was calculated from the data collected. It was hypothesized that those with a higher score of childhood trauma would be correlated with a lower socioeconomic

status as an adult, or that those with a lower ACE score would have a higher socioeconomic status as an adult. The results provide support for the initial hypothesis and demonstrate a negative correlation between increased childhood trauma and decreased SES , $r(193) = -.359$, $p = <.001$.

Two correlation coefficients were calculated to determine if the negative association between childhood trauma and current mental health differs between males and females. It was hypothesized that females would report a negative association between childhood trauma and mental health scores, such that increases in childhood trauma would be associated with decreases in mental health. It was also hypothesized that no significant correlation would be found for males between childhood trauma and mental health scores. Results indicate a negative correlation for males, $r(106) = -.476$, $p < .001$, and a negative correlation for females, $r(83) = -.284$, $p < .01$. Thus, the hypothesis was partially supported as the negative association was significant for both females and males.

A correlation coefficient was calculated to determine if increasing age is associated with higher experiences of childhood trauma as measured by Adverse Childhood Experiences Scale (ACE) score. It was hypothesized that older age would be positively correlated with higher reports of childhood trauma. Results indicate no statistically significant relationship between age and childhood trauma $r(193) = -0.106$, $p = .142$. Therefore, current age had no relationship with childhood trauma.

Discussion

In the present study, we predicted that participants who report adverse childhood experiences would encounter worse mental and physical health outcomes and lower SES in adulthood compared to those who report fewer ACEs. The results supported this hypothesis

because participants who described themselves as suffering more severe mental health problems, enduring higher levels of physical functioning limitation, and living in low SES also received higher scores on the ACEs questionnaire. A multiple regression test was partially consistent with the interpretation of ACEs that the correlation between increased sexual trauma and worse physical health performance was significant even with the control of physical trauma. The findings suggested that the maladaptive experience involving sexual trauma significantly predicts the severity of physical health outcomes later in life.

The study is consistent with previous research on how ACEs are linked to the QoL in adulthood, including mental health, physical health and SES. A meta-analysis study provided a supportive foundation for the findings that participants with higher ACEs scores have a greater risk of experiencing low QoL and chronic health conditions (Petruccelli et al., 2019). People who suffered early childhood trauma more frequently would be more vulnerable to getting involved in risky health behaviors (Petruccelli et al., 2019) and have less resilience to later health problems (Vederhus et al., 2021). Since people with a history of ACEs usually didn't have a stable and trustful environment to grow up in (Vederhus et al., 2021), the lack of positive views of self and others as well as support from important others led to pessimistic perception regarding living circumstances and enhanced the risk for adverse life outcomes later in adulthood.

As for the demographic identity, the study didn't find a significant correlation between age and ACEs. The hypothesis that older people would have a greater probability of reporting more early traumatic experiences was rejected. The finding was not consistent with previous research on the relationship between age and ACEs. There was no difference in the levels of ACEs between the older population and the younger population. In addition, the study result only partially supported the hypothesis that there should be a significant association between ACEs

and mental health conditions among women, while the men should not have a significant association between these two variables. Based on the data, we found that both men and women present the phenomenon that higher levels of ACEs would lead to more severe mental health problems, and both correlations were significant. The result was inconsistent with previous research on how gender moderates the relationship between ACEs and mental health. Our findings indicated that the gender difference impacted how ACEs and mental health were associated with each other in a different way. Male participants were more likely to report a negative correlation between ACEs and mental health, and the correlation was more significant than female participants.

A limitation of the present study was that the sample size was not sufficient to examine how gender worked as a moderator to the correlation between ACEs and mental health conditions. The recommended sample size for each gender was 115 ; however, we only recruited 106 male participants and 84 female participants. The insufficient sample size might have an impact on the validity of the moderation. Furthermore, the participants in the sample population were not representative of the overall population due to the unrepresentative sampling techniques. We utilized convenience sampling and snowball sampling to recruit participants, leading to a disproportionate diversity distribution. The participants in our sample population were majoritively white (N = 137) and heterosexual (N=149) participants. A future study with sufficient sample size and more diverse participants would be beneficial to see how this study result would be generalized to a larger population.

Another limitation of the present study was an issue with the instrument we used to collect the data for childhood trauma. The ACEs questionnaire utilized in the present study was established on the basis of a merely homological and limited population that was 79.8% White,

43.4% college graduates (Petruccelli et al., 2019). Although more and more studies in recent years consisted of a heterogeneous population, the researcher could not generalize the effect of the ACE scale and the correlation to a more significant universal population. Philadelphia Expanded ACE Survey is another instrument to assess childhood trauma, which is originally based on a diverse population and focuses on community-level adversity (Pachter et al., 2017). A direction of future research is using Philadelphia Expanded ACE Survey to target the minority population more sensitively and address the importance of identifying the impact of community-level adversity on mental and physical health, and SES as well as overarching quality of life in later adulthood.

Nonetheless, the study was designed with good internal validity. We used a between-subjects design to avoid the chance that the participants would acknowledge the intention of the comparison we were making. In addition, the screening for ACEs can potentially make participants feel a sense of shame and be less willing to report traumatic events since the questionnaire contained many questions about privacy and unpleasant experiences. Therefore, we put the ACEs questionnaire at the end of the survey to diminish any sense of intrusiveness, discomfort, or stigma for the participants. Concerning the construct validity, we used validated measurements of ACEs, mental health, physical health, and SES to ensure that the measures of traumatic experiences and current health conditions were more valid. The external validity of the study is unknown; we used a combination of convenience and snowball sampling to recruit participants. The sample population was not representative of the overall population, and the generalizability to other populations remained unidentified.

Conclusively, this study was able to document multiple important health outcomes that are associated with early childhood adversities. The relationship between ACEs and QoL in later

adulthood should be recognized as an important focus area globally to prevent severe mental and physical health problems. These observed correlations illuminate the potential of multiple settings and opportunities for education about ACEs, interrupting risky or problematic health behaviors, and strengthening protective factors to offset adversity effects.

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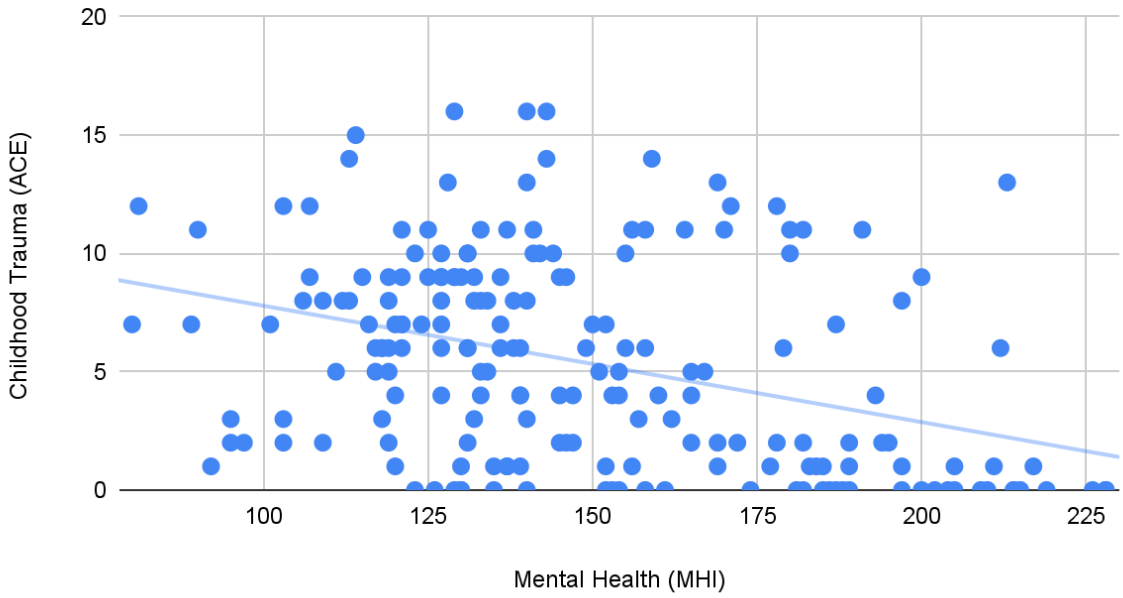
Figure 1

Association of Childhood Trauma and Mental Health



Appendix A: Amended Adverse Childhood Experiences Scale

(Tranter et al., 2021)

Items

Did a parent or other adult in the household often or very often . . .

1. Swear at you, insult you, put you down, or humiliate you?
2. Act in a way that you might be physically hurt?
3. Push, grab, slap, or throw something at you?
4. Ever hit you so hard that you had marks or were injured?

Did an adult or person at least 5 years older than you . . .

5. Touch or fondle you or have you touch their body in a sexual way?
6. Attempt to or actually have oral, anal, or vaginal intercourse with you?

Did you very often feel that . .

7. No one in your family loved you or thought you were important/special?
8. Your family did not look out for, feel close to, or support each other?
9. You did not have enough to eat, had to wear dirty clothes, and had no one to protect you?
10. Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
11. Were your parents ever separated or divorced?

Was your mother, stepmother, father, or stepfather . . .

12. Often or very often pushed, grabbed, slapped, or had something thrown at them?
13. Ever repeatedly hit for at least a few minutes or threatened with a gun or knife?
14. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

15. Was a household member depressed or mentally ill, or did a household member attempt suicide?
16. Did a household member go to prison?

Items are scored as yes (1) or no (0).

Appendix B: Mental Health Inventory

(Veit and Ware, 1983)

1. How happy, satisfied, or pleased have you been with your personal life during the past month?
2. During the past month, how often did you feel there were people you were close to?
3. During the past month, how often has feeling depressed interfered with what you usually do?
4. How much of the time, during the past month, did you have difficulty reasoning and solving problems; for example, making plans, making decisions, learning new things?
5. During the past month, how much of the time have you generally enjoyed the things you do?
6. How much of the time, during the past month, has your daily life been full of things that were interesting to you?
7. During the past month, how much of the time have you felt loved and wanted?
8. How much of the time, during the past month, have you been a very nervous person?
9. During the past month, how much of the time did you have difficulty doing activities involving concentration and thinking?
10. During the past month, how much of the time did you feel depressed?
11. During the past month, how much of the time have you felt tense or "high-strung"?
12. During the past month, how much of the time have you been in firm control of your behavior, thoughts, emotions, feelings?
13. During the past month, how much of the time did you become confused and start several actions at a time?

14. During the past month, how much of the time did you feel that you had nothing to look forward to?
15. How much of the time, during the past month, have you felt calm and peaceful?
16. How much of the time, during the past month, have you felt emotionally stable?
17. How much of the time, during the past month, have you felt downhearted and blue?
18. How often have you felt like crying during the past month?
19. How much of the time, during the past month, did you feel left out?
20. During the past month, how often did you feel that others would be better off if you were dead?
21. During the past month, how much of the time did you forget, for example, things that happened recently, where you put things, appointments?
22. During the past month, how much of the time did you feel that your love relationships, loving and being loved, were full and complete?
23. How much have you been bothered by nervousness, or your "nerves," during the past month?
24. During the past month, how much of the time has living been a wonderful adventure for you?
25. How much of the time, during the past month, have you felt so down in the dumps that nothing could cheer you up?
26. During the past month, did you ever think about taking your own life?
27. During the past month, how much of the time have you felt restless, fidgety, or impatient?
28. During the past month, how much of the time have you been moody or brooded about things?

29. During the past month, how often did you get rattled, upset, or flustered?
30. How much of the time, during the past month, did you have trouble keeping your attention on any activity for long?
31. During the past month, how much of the time have you been anxious or worried?
32. During the past month, how much of the time have you been a happy person?
33. How often during the past month did you find yourself having difficulty trying to calm down?
34. During the past month, how much of the time have you been in low or very low spirits?
35. How much of the time, during the past month, have you felt cheerful, lighthearted?
36. During the past month, how depressed (at its worst) have you felt?
37. How much of the time, during the past month, did you react slowly to things that were said or done?
38. During the past month, how often did you feel isolated from others?

MHI Response Choices

Question 1:

(1) Extremely happy, could not have been more satisfied or pleased;

(2) Very happy most of the time;

(3) Generally satisfied, pleased;

(4) Sometimes fairly satisfied, sometimes fairly unhappy;

(5) Generally dissatisfied, unhappy;

(6) Very dissatisfied, unhappy most of the time

Questions 2-3, 18, 20, 29, 33, 38:

(1) Always,

(2) Very often,

(3) Fairly often,

(4) Sometimes,

(5) Almost never,

(6) Never

Questions 4-17, 19, 21-22, 24-25, 27-28, 30-32, 34-35, 37:

(1) All of the time,

(2) Most of the time,

(3) A good bit of the time,

(4) Some of the time,

(5) A little of the time,

(6) None of the time

Question 23:

(1) Extremely so, to the point where I could not take care of things;

(2) Very much bothered;

(3) Bothered quite a bit;

(4) Bothered some, enough to notice;

(5) Bothered just a little;

(6) Not bothered at all

Question 26:

(1) Yes, constantly;

(2) Yes, very often;

(3) Yes, fairly often;

(4) Yes, a couple of times;

(5) Yes, once

(6) No, Never

Question 36:

(1) Extremely depressed,

(2) Very depressed,

(3) Quite depressed,

(4) Somewhat depressed,

(5) A little depressed,

(6) Not depressed at all

MHI Response Scoring

The following questions are reverse-scored to ensure higher scores equate to higher levels of mental health: 1-2, 5-7, 12, 15-16, 22, 24, 32, 35.

Appendix C: RAND-36

(Ware & Sherbourne, 1992)

1. In general, would you say your health is:
2. How much bodily pain have you had during the past 4 weeks?
3. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

4. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports
5. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf
6. Lifting or carrying groceries
7. Climbing several flights of stairs
8. Climbing one flight of stairs
9. Bending, kneeling, or stooping
10. Walking more than a mile
11. Walking several blocks
12. Walking one block
13. Bathing or dressing yourself

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

14. Cut down the amount of time you spent on work or other activities

15. Accomplished less than you would like

16. Were limited in the kind of work or other activities

17. Had difficulty performing the work or other activities (for example, it took extra effort)

How TRUE or FALSE are each of the following statements for you.

18. I seem to get sick a little easier than other people

19. I am as healthy as anybody I know

20. I expect my health to get worse

21. My health is excellent

RAND-36 Response Choices

Question 1: Excellent, Very Good, Good, Fair, Poor

Question 2: None, Very mild, Mild, Moderate, Severe, Very severe

Question 3: Not at all, A little bit, Moderately, Quite a bit, Extremely

Question 4-13: Yes, Limited a lot; Yes, Limited a little; No, Not limited at all

Question 14-17: Yes, No

Question 18-21: Definitely true, Mostly true, Don’t know, Mostly false, Definitely false

Appendix D: Modified Family Resource Scale

(Ompad et al., 2012)

At the present moment, how often are the following needs met:

1. Food for two meals a day
2. House or apartment
3. Money to buy necessities
4. Enough clothes for you or your family
5. Heat for your house or apartment
6. Indoor plumbing or water
7. Money to pay monthly bills
8. Good job for yourself or your spouse
9. Medical care for you or your family
10. Public Assistance (SSI, AFDC, Medicaid etc.)
11. Dependable transportation
12. Furniture for your home or apartment
13. Telephone or access to phone
14. Dental care for you or your family
15. Money to buy things for yourself
16. Money for entertainment
17. Money to save

Modified Family Resource Scale Response Choices

Questions 1-9, 11-17: 0 (Never), 1 (Rarely), 2 (Less than ½ the time), 3 (About ½ the time), 4 (More than ½ the time), 5 (Always)

Question 10: 0 (Never), 1 (Rarely), 2 (Less than ½ the time), 3 (About ½ the time), 4 (More than ½ the time), 5 (Always), Not Applicable

Appendix E: Informed Consent

UNIVERSITY OF MICHIGAN
CONSENT TO BE PART OF A CLASS RESEARCH STUDY

Study title: Early Traumatic Experiences: How Individual Events Associate with Quality of Life
Co-investigators: Arianna Brangman, Nick Brdar, Ray He, Lynsey Randolph, Shelby Wilson, and Chasey Lake, University of Michigan
Faculty Advisor: Dr. Sarah Jonovich, PhD, Department of Psychology, University of Michigan

You are invited to participate in a research study. This form contains information that will help you decide whether to join the study. Taking part in this research project is voluntary. You do not have to participate and you can stop at any time. Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

This study is about early traumatic experiences and their association with quality of life. The purpose of your participation in this research is to help the researcher collect data in an effort to gain additional knowledge on early traumatic experiences' correlation with the later quality of life factors of mental health, physical health, and socioeconomic status.

Who can take part in this study?
We estimate that 200 participants will enroll in this study. Participants must be the age of eighteen years or older and currently residing in the United States.

If you agree to be part of the research study, you will be asked to complete an anonymous online survey. We anticipate it will take approximately ten (10) minutes to complete.

What risks will I face by taking part in the study? What will the researchers do to protect me against these risks?

The risk of participating is minimal. First, it is possible that the time commitment (10 minutes) involved in this study could inconvenience you. In addition, given the topic of this research, you may come across a question or answer choice that you find unpleasant, upsetting, or otherwise objectionable. For example, it is possible that some of the questions related to early traumatic experiences might be disturbing or cause distress. If you feel that taking the questionnaires has resulted in emotional distress, please feel free to skip the question or stop participating as part of the study.

The researchers will try to minimize these risks by providing information for mental health and counseling resources. In addition, all information will be anonymous, so no personal information will be collected in this study.

You do not have to answer any questions you do not want to answer.

If you experience any discomfort answering questions, you can find counseling services at the following:
Counseling and Psychological Services Crisis Line: https://caps.umich.edu/ (517) 355-8270
Sexual Assault Prevention and Awareness Center Crisis Line: https://sapac.umich.edu/ (734)-936-3333
National Suicide Hotline: https://suicidepreventionlifeline.org/ 800-273-8255
Suicide.org: http://suicide.org/ 1-800-784-2433

How could I benefit if I take part in this study? How could others benefit?
You may not receive any personal benefits from being in this study. However, others may benefit from the knowledge gained from this study. The anticipated benefit of this research is to be able to use the association between early traumatic experience and quality of life to predict the negative consequences of experiencing adverse events during childhood.

Compensation will not be given.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any survey question or not to finish the survey at any time.

The record from this study will be kept confidential. Identifiable information will not be asked and all survey responses downloaded will be coded in order to ensure anonymity. The research team will not share individual responses given and will only be used during statistical analyses.

We are completing this research project for a class assignment. We will not include any information that would identify you, so all responses will remain anonymous. Your privacy will be protected and your answers will remain confidential. All data will be collected on Qualtrics and downloaded by the research team for educational purposes only. After the project is complete (expected April 2022), the data will be permanently erased and will not be used in the future. We will not store your research information or share it with other researchers.

If you have questions about this research study, please contact any group member Arianna Brangman at arielise@umich.edu, Nick Brdar at nbrdar@umich.edu, Ray He at rayhe@umich.edu, Lynsey Randolph at lynseyr@umich.edu, Shelby Wilson at

shmawi@umich.edu, and Chasey Lake at lakech@umich.edu or our faculty advisor Sarah Jonovich, PhD at jonovich@umich.edu.

As part of their review, the University of Michigan Institutional Review Board Health Sciences and Behavioral Sciences has determined that this study is no more than minimal risk and exempt from on-going IRB oversight.

By clicking “Next”, you are agreeing to be in this study. You may print a copy of this document before clicking next for your records.

Appendix F: Demographic Measures

Age

What is your current age?

[____]

Gender

How would you describe your gender?

[Male] [Female] [Non-Binary] [Other] [Prefer not to say]

Sexuality

How would you describe your sexuality?

[Straight] [Gay] [Lesbian] [Bisexual] [Other] [Prefer not to say]

Race

How would you describe your race?

[White/Caucasian] [Asian] [Hispanic] [Black/African-American] [Native-American]

[Multi-Racial] [Other] [Prefer not to say]