

YA WELL-BEING AFTER CHILDHOOD MALTREATMENT

**Young Adult Well-Being After Childhood Maltreatment Experiences**

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### Abstract

The purpose of this study was to examine the relationship between adverse childhood experiences (ACE's), attachment style, and well-being in transition-age youth. The study sought to address two questions; is the attachment style of young adults who have experienced maltreatment associated with well-being and overall adjustment in the transition to adulthood? What is the lived experience of young adults who have experienced child maltreatment as they transition to adulthood? An online survey containing questions about demographics, 3 validated measures (the ACE questionnaire, Revised Adult Attachment Scale, and the Mental Health Continuum Short Form), and expanded ACE item questions was administered to transition-age youth (ages 18-26) throughout the United States using convenience sampling. The sample ( $n = 99$ ) was examined through bivariate correlations and multinomial regression models to assess for relationships between ACE score (traditional and expanded), attachment style, and well-being. Household composition was considered with the reference variable of "living with a romantic partner". Gender and foster care status were examined for interaction in subgroup analyses. An optional follow-up interview was conducted with 3 interviewees for qualitative theme analysis. The sample had a high prevalence of fearful attachment style ( $n = 43, 43.4\%$ ) and languishing mental health ( $n = 44, 44.4\%$ ). ACE score (traditional and expanded) was positively correlated with languishing mental health in the transition to adulthood. Attachment style and living with a partner or spouse were not significantly associated with mental health. Gender and foster care status both had independent significant interactions with ACE score and mental health. Three themes were consistent throughout the interviews: unstable relationships, low self-image, and silver lining. Further research on assessing attachment style in transition-age youth is needed to accurately assess the impact on well-being in relationship to adverse childhood experiences.

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### Definition of Terms

<b>Parent(s)</b>	Biological parent(s) or primary caregiver(s) of a child or adolescent
<b>Child Maltreatment</b>	“any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation” (42 U.S.C.A. § 5106g)
<b>Emotional Abuse</b>	“a pattern of behavior that impairs a child’s emotional development or sense of self-worth” (Child Welfare Information Gateway, 2019)
<b>Physical Abuse</b>	“a nonaccidental physical injury to a child caused by a parent, caregiver, or other person responsible for a child and can include punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting (with a hand, stick, strap, or other object), burning, or otherwise causing physical harm” (Child Welfare Information Gateway, 2019)
<b>Sexual Abuse</b>	“includes activities by a parent or other caregiver such as fondling a child’s genitals, penetration, incest, rape, sodomy, indecent exposure, and exploitation through prostitution or the production of pornographic materials” (Child Welfare Information Gateway, 2019)
<b>Neglect</b>	“the failure of a parent or other caregiver to provide for a child’s basic needs including physical, medical, educational, and emotional needs” (Child Welfare Information Gateway, 2019)
<b>Protective Factors</b>	Individual, interpersonal, or environmental that may protect children from experiencing maltreatment (Child Welfare Information Gateway, 2004)
<b>Resilience</b>	The capacity to survive and grow despite experiencing serious hardship (Center on the Developing Child, 2022)
<b><u>Protective Factors</u></b>	
<b>Social Support</b>	“strong social support networks and stable, positive relationships with the people around them” (Center for Disease Control and Prevention, 2021)
<b>Life Satisfaction</b>	A measure of a person's well-being considering their view of their whole life, including mood, education, income, relationships, achievements, and personal health rather than just current feelings (OECD Better Life Index, 2020)
<b>Positive Self-Image</b>	“individuals’ positive inclination about their own self and abilities” (Arslan et Genç, 2022)

## **Introduction and Background**

When youth reach the age of 18, they enter a crucial period in their lives where they begin to transition to adulthood. They find their independence, autonomy, and identity outside of their previous family role (Cano-López et al., 2021). This timeframe is heavily influenced by the relationships they hold and how they view and experience their own well-being. When youth have had adverse experiences that affect their socioemotional development, the adolescence period becomes even more stressful and difficult to navigate, impacting social relationships, academic success, and decision-making skills (Insana et al., 2016). In this study, the term parent will be used to refer to the primary caregiver. During the early developmental stages, parents model what relationships with each other should look like. In some cases, the model given to the child is not the healthiest in terms of emotional security. According to attachment theory, if a parent is not emotionally and physically available, the child will become distressed and feel insecure in their attachment to their parent (Hutchison, 2019). As the child grows older, they may exhibit lasting effects of their learned attachment behaviors. The severity of the damage can vary depending on the individual situation. In more severe cases that involve child abuse or abandonment, children may develop a very complicated and warped perspective of what acceptable behavior is – both toward themselves and toward others.

Child maltreatment, as defined by the Child Abuse Prevention and Treatment Act (CAPTA), includes “any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation” (42 U.S.C.A. § 5106g), and occurs across all socioeconomic levels. The factors that lead to abuse are not the same in every situation, though there are some known risk factors such as previous abuse, financial distress, and substance misuse issues (Centers for Disease Control and Prevention,

2020). Child maltreatment situations are often complex; one or both parents are likely to have experienced abuse or traumatic events that have shaped their behaviors. In this way there may be an intergenerational transmission of trauma passed from one generation to the next, as the child is at a higher risk of experiencing maltreatment because one of their parents has experienced it (Gilbert & Lacey, 2021). Whether maltreatment continues in the next generation, the way that children interact with their parents will shape how they initiate and maintain relationships with other people. If violence, physical abuse, or emotional abuse was prevalent in the home, the child may view that type of behavior as acceptable and continue these patterns when they transition to adulthood and search for potential long-term partnerships (Shields et al., 2020).

When children and adolescents experience maltreatment, they may develop maladaptive coping strategies such as substance use, social isolation, and self-injury (Milojevich et al., 2018). There are a multitude of factors that impact how an adolescent is able to adapt in the aftermath of experiencing maltreatment. There are factors that can counteract the likelihood of experiencing child maltreatment and its lasting effects known as protective factors. These factors are found on three levels; individual, interpersonal, and environmental. Some known protective factors include good health of the child, secure attachment to parents, supportive parents and extended family, and access to quality health care (Child Welfare Information Gateway, 2004). Without treatment and proper care, maladaptive coping skills and learned unhealthy behaviors can affect the overall well-being of the adolescent. However, children and adolescents may have or develop factors of resilience; the capacity to survive and grow despite experiencing serious hardship (Center on the Developing Child, 2022). Resiliency can come from the environment or from biological factors. Children and adolescents who have higher levels of resilience are better equipped to cope with adversity and still maintain healthy development. The most prominent

factor that builds resilience in adolescents is having at least one strong, stable, and supportive relationship with an adult in their life whether it be a parent, extended family member, or other adult (Center on the Developing Child, 2022). Other factors that can promote resiliency include positive environmental interactions such as engaging schools and feeling a sense of connection with the community, as well as social support and prevalence of hope (Longhi et al., 2021). Therefore, it is crucial that resources and support are available to children and adolescents who may be dealing with a challenging home environment. Without development of protective factors such as resiliency, the insecure, anxious, or avoidant attachment behaviors can greatly impact a person's adult social and romantic relationships (Muetzelfeld et al., 2020).

The objective of this proposed study is to gain a better understanding of how childhood experiences of maltreatment impact attachment style and overall well-being during the early adulthood period, ages 18 to 26. To do this, the following research questions guide this study:

1. Is the attachment style of young adults who have experienced maltreatment associated with well-being and overall adjustment in the transition to adulthood?
2. What is the lived experience of young adults who have experienced child maltreatment as they transition to adulthood?

### **Literature Review**

There are many risk factors that can contribute to child maltreatment. Some individual factors such as low-income socioeconomic status, previous abuse, substance misuse, and pre-existing mental health issues can increase the risk of child maltreatment (Centers for Disease Control and Prevention, 2020). Additionally, there are family risk factors that are associated with



maltreatment such as pre-existing domestic violence, and divorce or separation (Centers for Disease Control and Prevention, 2020).

While child maltreatment spans all socioeconomic levels, the stress of worrying about income and shelter and the impacts of social control when experiencing poverty may increase the occurrence of maltreatment (Maguire-Jack et al., 2022). Cases of child maltreatment are much more likely to be reported in children of color than white children and families. This could be influenced by living in high-risk neighborhoods that have added community risks such as exposure to violence, housing barriers, and financial insecurity (Wulczyn, 2009). An additional influence could be a bias in reported suspicion of maltreatment for children of color over white children and families. The over-surveillance of Black families can cause trauma to the families and increase the involvement of Black children in the foster care system (Dettlaff et al., 2020). Overall, child maltreatment has remained an ongoing public health issue with the Child Protective Services (CPS) agency reporting receiving a national estimate of over 4 million referrals in 2019 alone (U.S. Department of Health & Human Services, 2021).

### **Impact of Maltreatment on Transition-Age Youth**

There is ample documentation that childhood maltreatment can leave lasting emotional and behavioral problems that can extend into adulthood, such as anger management issues (Fagan, 2019), psychiatric disorders (Keyes et al., 2012, Strathearn et al., 2020), and lower levels of life satisfaction (Hoefnagels et al., 2020). Exposure to physical violence during childhood has been linked to other negative outcomes such as committing interpersonal violence, substance misuse, and non-suicidal self-injury (LaBrenz et al., 2021). Experiencing maltreatment and other adverse experiences brings a higher risk of premature death and other physical health complications (Mosley-Johnson et al., 2018).

Maltreatment experienced in childhood is associated with developmental and behavioral difficulties in children. In a study of children ages 0 to 9, Font and Berger (2015) discovered that experiencing maltreatment before age 3 was strongly correlated with difficulty with cognitive skills. However, reoccurring maltreatment over time also affects developmental processes. This is important to note as an isolated incident of abuse has a different effect on children than recurring stressful and traumatic situations. Physical neglect, the intentional deprivation of a child's basic needs such as proper nutrition and shelter, was the strongest factor in adverse socioemotional outcomes compared to supervisory neglect, physical abuse, and emotional abuse (Font & Berger, 2015). Proper nutrition and protection from the outside environment are pivotal for healthy development in all areas. The deprivation of these components leads to inhibited development and difficulty regulating emotions. Emotional abuse affects socioemotional well-being as well. Emotional abuse is associated the development of maladaptive perceptions of the person's environment which further complicates socio-emotional growth and functioning (Font & Berger, 2015).

As children reach the adolescence and adulthood, those developmental impacts may impair their ability to navigate transitioning to adulthood successfully. Maladaptive perceptions of the environment that have not been addressed can affect how a person interacts with others and their capacity to trust themselves and the environment around them.

### **Well-Being among Transition Age Youth**

In contrast to negative outcomes related to health, mental health, or health risk behaviors, other literature has focused on measures of wellness or well-being. Well-being encompasses flourishing mental health, physical wellness, relational belongingness, and positive feelings towards life. The emotional dimension of well-being relates to happiness levels and satisfaction

with life, while the external dimension refers to a person's ability to interact socially and function confidently in society (Rose et al., 2017). A recent study found positive well-being in college age students to be correlated with mental health, high levels of happiness, and the formation of healthy coping skills (Arslan et Genç, 2022).

Another measure of well-being is life satisfaction, which has been linked to positive life events in adulthood such as getting married, receiving a promotion or new job offer, or deciding to have children (Luhmann et al., 2013). It is a crucial factor in positive mental health and feelings of well-being. When operationalizing well-being as satisfaction with life and positive feelings about the future, an abundance of life satisfaction was found to be correlated with happiness while low levels of satisfaction are correlated with behavioral disorders such as depression. In a study of university students at Bezmialem Vakıf University in Istanbul, the results showed a correlation between non-secure attachment styles and decreased levels of life satisfaction compared to those of people with a secure attachment style (Temiz & Comert, 2018). Attachment styles have proven to be essential in an individual's feelings of well-being, thus their overall life satisfaction (Temiz & Comert, 2018). A positive outlook on life would indicate a level of satisfaction with current life even if there have been past challenges or traumas. For people who have experienced maltreatment as a child, positive mental health and life satisfaction may be harder to attain as a young adult. Higher prevalence of adverse childhood experiences, including maltreatment, are associated with lower levels of life satisfaction in adulthood (Mosley-Johnson, 2018).

Young adults who have experienced child maltreatment, particularly emotional abuse, often develop low self-esteem and negative self-image if not protected by other factors such as strong social support or positive relationships with other trusted adults (Calheiros et al., 2020).

Negative self-image interferes with a young adult's ability to logically address challenges. While they may be able to emotionally soothe themselves to an extent, the struggle to handle conflict and trust in oneself can be crippling to a young adult. Psychological maltreatment, including terrorizing, isolating, belittling, ignoring, and berating a child, can incur behavioral and emotional difficulties that extend into adolescent and young adulthood (Arslan et Genç, 2022). Protective factors such as support from friends or other adults and academic or athletic achievement can mitigate some of the damaging effects of psychological maltreatment such as negative self-perception. When a positive view of the self is achieved, a person who has experienced child maltreatment is less likely to experience negative outcomes such as emotional instability and behavioral issues (Arslan et Genç, 2022). This protective factor prevents the effects of maltreatment from having as much of an impact on a young adult's ability to maintain positive well-being and flourish in their changing environment. Social support can not only improve self-perception but also overall feelings of health and positive affect (Khrapatina & Berman, 2017). Negative self-image is positively correlated with emotion-focused coping and negatively correlated with problem-focused coping (Mayordomo-Rodríguez et al., 2015). The use of positive coping skills to deal with stress and continuous change is imperative at this critical time in a person's life.

### **Theoretical Framework**

Child maltreatment encompasses physical, emotional, verbal, and sexual abuse and neglect, both of which have lasting effects on the holistic development of children (Font & Berger, 2015). From the psychodynamic perspective, the interactions between parent and child are directly influential on the child's understanding of the world around them. Even before the child can effectively communicate verbally with their parent, dyadic interactions play a large role

in shaping the behavior of children (Hutchison, 2019). When the interactions are negative, they can inhibit the healthy development of the child on cognitive, emotional, and social levels. Negative interactions can include crying and not receiving comfort, not receiving adequate nutrition, or yelling and punishing the child for expressing a need. As a child grows and matures these adverse experiences are internalized and can affect the beliefs the child holds about themselves and how they should be treated.

At its roots, the psychodynamic perspective focuses on the needs and drives of people, particularly the unconscious ones. Our unconscious desires influence our external behavior. These desires, feelings, and motives are all developed by our past experiences and stored in the brain. In the context of child maltreatment, this means that children may grow to repeat and accept the violent or maladaptive patterns of their parents (Shields et al., 2020). If a child was emotionally neglected, they may have an amplified need for emotional connections and an inhibited reward response leading them to seek connection in unhealthy ways (Babad et al., 2021). If there was violent behavior in the home, they may hold the unconscious belief that violence is an acceptable part of relationships with others.

The psychodynamic perspective also emphasizes the ability of humans to adapt and develop defense mechanisms against further harm (Hutchison, 2019). The formation of close personal relationships and a support system can act as a defense against the negative emotional and developmental effects of child maltreatment. Despite an unfavorable relationship with the parent, a child can adapt to their environment and compensate for their parent's abuse or neglect (Hetherington, 1999). The internal narrative is ameliorated by the positive factors in their life, protecting them from at least some of the detrimental effects of experiencing child maltreatment.

### **Attachment Theory**

A theory that guides work with parent-child interactions, particularly when individuals have experienced maltreatment, is attachment theory. The theory was developed by John Bowlby and Mary Ainsworth beginning in the 1950's. Attachment theory posits that children's relationships with their parents, especially their mothers, are intensely affected and shaped by closeness, deprivation, and estrangement (Bretherton, 1992). Children's world views and expectations of others are shaped by what they view and experience with their parents. In parent-child relationships, children learn what to expect from their parents through their experiences and interpretations of care. These experiences not only shape what they come to expect in other relationships, but they become integrated into the child's beliefs about themselves (Harris et al., 2015). The components of security, agency, attention, and purpose are directly violated by emotional abuse or neglect in the relationships with the child's parents. Children do not have the cognitive capacity to comprehend that their parent is both their source of security and the person who is causing them harm (Shockley McCarthy et al., 2020). Without this capacity, a child will learn to respond to their parent in a way that is not upsetting in order to gain some sense of safety. The way that a child's attachment develops is thought to have a direct link to their parent's own attachment style and their feelings regarding their parenting and ability to provide a good emotional foundation for their child (Iwaniec, 1995). Therefore, parents who went through their own adversity growing up might project their own disorganized attachments onto their children, perpetuating a cycle of maltreatment. This cycle is perpetuated when parents do not adequately address their own trauma histories prior to becoming parents (Mulder et al., 2018). Children, in turn, learn maladaptive coping skills from experiencing trauma and observing their parents respond to challenges with negative coping skills, which may then perpetuate intergenerational cycles of maltreatment.

Grounded in attachment theory, several attachment-based interventions have been developed to facilitate more nurturing dyadic relationships between parents and children. For example, in Moretti and colleagues' (2015) study of the Connect program that worked with parents of teenagers found that program participation improved adolescent outcomes such as decreased avoidance of attachment, anxiety surrounding attachment, and decreased affect dysregulation. The California Clearinghouse of Evidence Based Practice currently has two attachment interventions that it has rated as "evidence-based" in improving outcomes for children and youth exposed to maltreatment; indeed, utilization of interventions such as child-parent relationship therapy and dyadic developmental psychotherapy may help youth achieve wellbeing after experiencing maltreatment (California Clearinghouse of Evidence Based Practice, 2022). Involvement of the parents in child maltreatment interventions can be difficult but yields positive results for both parents and adolescents including increased confidence in managing child behavior and decreased use of harsh parenting methods (Jouriles et al., 2010). The introduction of positive coping skills at a young age allows adolescents the ability to practice adaptive coping as they develop, promoting resilience to new stressors as they age (Frydenberg et al., 2021). The focus on attachment in intervention has also proven to combat negative self-image, increasing the levels of self-esteem in youth who have had a disruptive childhood. While attachment styles are greatly determined from early childhood experiences, both studies proved that positive change is possible. Attachment styles are deeply ingrained in personality and behavior but are nonetheless dynamic.

While there are evidence-based practices to improve attachment, there are also other factors that may contribute to enhanced wellbeing among youth who experienced maltreatment as children. For example, in attachment theory, corrective emotional experiences have been

found to improve relational outcomes and increase secure attachment among youth who have experienced maltreatment. Although corrective emotional experiences often are provided in a therapeutic, clinician-client context, these can also occur via positive, significant relationships with significant figures such as coaches, teachers, or pastors (Riley, 2013).

Within the literature reviewed, there is still room for further research. There is abundant information about how child maltreatment and neglect affect how children develop attachment behaviors, and there is much information about how experiencing the trauma of maltreatment can lead to mental health issues and behavioral dysregulation. The gaps uncovered are in connecting all of these components back to specific insecure attachment styles. There is a gap in the research regarding how experiencing maltreatment affects a person's ability to cope with the many changes that occur while transitioning to adulthood. Understanding the relationships between childhood exposure to maltreatment, attachment, and experiences of transition-age youth can help identify additional protective factors and resilience that may facilitate an individual's ability to enter adulthood smoothly.

## **Method**

### **Participants**

This study explores how transition-age youth (18 to 26 years of age) experience well-being and how their primary attachment style affects their experience of well-being. Data for this study were compiled through both quantitative and qualitative approaches, including an online survey and a brief follow-up interview. The electronically-distributed survey contained both open-ended and close-ended questions and utilized three separate validated measures. At the end of the survey, participants were asked if they would be interested in completing a follow-up



interview. The interview provided an opportunity to collect more detailed, in-depth information regarding lived experience from participants about their childhood experiences and their well-being in the transition to adulthood. Responses given in the interview are not associated with the participant's survey answers to maintain confidentiality.

### **Recruitment**

The primary investigator utilized convenience sampling, sharing the survey link and research study information with mental health service providers, state agencies, and non-profits in the United States. 15 agencies were contacted directly for survey distribution, all but 2 were unresponsive or declined. Additionally, a flyer for the research study was posted at the UT Arlington campus as well as local coffee shops that consented to the flyer being posted to their bulletin board. The recruitment methods were expanded to include social media recruitment. The research study information and survey link were shared in numerous Facebook groups in two main categories. Mental health and social service professional groups were used to reach a broader client base. Interest groups that appealed to the target demographic, individuals between the ages of 18 and 26, were also used. A total of 25 Facebook group administrators were contacted for posting approval with 10 giving approval.

Child maltreatment can be a sensitive subject for anyone involved. As such, the informed consent included a description of the content areas that would be covered on the survey, and also included information and links to connect to mental health support in the event of psychological distress. All procedures were vetted and approved by the University of Texas at Arlington Institutional Review Board. All recruitment partners were given information about the survey and its objectives, but otherwise no references to child maltreatment were made in the survey link or the recruitment flyer.

### **Inclusion Criteria**

Inclusion criteria were: 1) having experienced child maltreatment; and 2) currently between the ages of 18 and 26. Furthermore, given the scope and personnel involved, only individuals who were proficient in English were be eligible to participate.

### **Survey**

After participants access the survey link, informed consent was provided to each person detailing the study and the participant's rights. If they agreed to participate after being given this information, they proceeded to the first step of the research study. The electronic survey contained 6 sections of questions with pre-screening questions within the first section. The inclusion criterion included age and history of maltreatment, as defined by the Child Abuse and Prevention Treatment Act (CAPTA) and Adverse Childhood Experiences (ACE) questionnaire questions. Participants had to be between the ages of 18 and 26 years old, live in the United States, and indicate they had experienced child maltreatment as defined by the pre-screening questions. If a participant did not meet the criterion, they were screened out. Once a participant completed the pre-screening questions, the remainder of the first section collected demographic information such as age, race, ethnicity, and household, education, and relationship information.

After the initial screening questions, there were two sections; The Childhood Experiences and Attachment Assessment. These sections had 34 questions. 28 items come from two validated measures: The ACE questionnaire (section 2, 14 items) and the Revised Adult Attachment Scale (section 4, 18 items). The ACE questionnaire items that were used in the pre-screening questions were not repeated in these sections. In a retrospective study of the validity of the ACE, it was determined that there was good reliability of the ACE scores and their agreement over

time (Pinto et al., 2014). Additional questions from the research team were added that addressed expanded ACE categories, such as experience in foster care, discrimination, and bullying. The next section utilized the Revised Adult Attachment Scale (AAS) to capture the participant's primary attachment style. Following this measurement tool, the last section used the Mental Health Continuum Short Form (MHC-SF). Participants were asked to briefly describe how they feel that the items in the MHC-SF tool affect their experience of well-being.

In addition to these two sections, there were 23 questions that were developed by the lead researcher of the study, based on prior literature and theory. These questions were reviewed by a team of three experts in the topic of child maltreatment and transition-age youth. Questions include items related to demographics (section 2, 22 items), and open-ended questions relating to experiences of well-being (section 5, 1 item). Among demographic variables, respondents were asked to identify their race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic—any race, American Indian/Native American, Asian, or Multiracial), gender (male, female, non-binary, other/prefer not to say), and household composition (rent/own/live rent-free and relationship to any housemates). Household composition was not mutually exclusive, as respondents could select multiple responses, such as “living with parents,” “living with a romantic partner,” or “living with children.” For the multivariable analyses, we only included a dummy-coded variable to compare those living with a romantic partner (1) to all others (0). Please see Appendix A for the full list of survey questions.

### **Interview Data Collection**

All survey respondents were given the opportunity to opt-in to participate in a follow-up interview. If respondents chose to opt-in, they were prompted to enter their contact information on a separate contact form that is not linked to their survey responses. If participants chose to

take part in a follow-up interview, the primary researcher reached out via e-mail to schedule the interview. Interviews were conducted on Zoom and recorded with the participant's consent. The interview followed a semi-structured guide containing open-ended questions that give the participant the opportunity to expand on their childhood experiences and their experience of well-being. Please see Appendix B for a full list of interview questions. Questions assessed the subjective experience by asking questions such as; How, if at all, do you think your adverse childhood experiences have affected your relationships? How do you think your childhood experiences have shaped your current mental, emotional, and physical health? After the interview ended, it was transcribed verbatim by the primary researcher. The interviews provided a more in-depth information regarding the personal experience of each participant. The first-hand feedback from participants was essential to understanding the experience of the young adults who are evaluated.

### **Data Analysis**

All survey data was exported to the Statistical Package for Social Sciences (SPSS), version 23. Exclusion criteria used for survey participants include age, geographical location, and experiences of maltreatment as measured by the ACE items and CAPTA definition in the first section of the survey. Participants who were under 18 years of age or over 26 years of age were screened out. Participants who did not reside in the United States were also screened out. If a participant indicated that they did not experience any of the 4 ACE items or identified with the CAPTA definition of child maltreatment, they were screened out. If a survey response was completed in less than 60 seconds, it was reviewed for anomalies and screened out by the principal investigator if it was deemed inadmissible. Duplicate responses were evaluated by IP addresses and e-mail addresses and screened out.

Descriptive statistics were conducted to examine frequencies, percentages, means, and standard deviations, as well as outliers. As the survey included a forced response for the main measures of interest, all respondents who were eligible and screened in to complete the survey had complete data ( $n = 99$ ). To answer the second research question, a series of bivariate analyses were conducted using chi-squared, t-tests, and one-way ANOVAs. Then, a series of multinomial logistic regressions was conducted to examine the relationship between attachment, ACE score, and flourishing mental health after adjusting for other factors. For bivariate and multivariate analyses of results from the Revised AAS, the variables were dummy coded to create one variable for attachment style. The reference group was secure attachment, with all other attachment styles compared against it.

In the survey, participants were given the following options for race and ethnicity: Non-Hispanic White, Non-Hispanic Black/African American, Hispanic, American Indian and Alaska Native, Asian, Other, or Prefer not to answer. A majority of the respondents identified as non-Hispanic White ( $n = 63, 63.6\%$ ). Due to the relatively low number of people that did not identify as non-Hispanic White that responded, race and ethnicity were re-coded into non-Hispanic White compared to all others. Due to the distribution and relatively low number of respondents who indicated experiencing 1 to 3 ACE items, it was decided to report ACE score and expanded ACE score as continuous variables. Based on the distribution, overall high average, large standard deviation and variance in the ACE score and expanded ACE score, these were included as continuous variables in the final models. In the quantitative analyses, significance was set at  $p < .05$ . Given the relatively small sample, in the results we also report on findings *approaching significance* or with a  $p < .10$ .

For the qualitative analyses, a thematic approach was used. The lead researcher conducted line-by-line coding in a two-stage process: in the first stage, each line was read to identify the main idea or concept that the participant had expressed. In this stage, a constant comparison method was used to identify similarities and differences in codes. The lead researcher met weekly with the faculty advisor to go over emerging codes and share the codebook. In the second stage of analysis, codes were grouped by similarities into larger themes. The qualitative analysis addressed the first research question and results were synthesized together with the quantitative findings to offer potential explanations for the relationships found in the survey data.

## **Results**

A total of 202 survey responses were received, of which 99 participants were screened and not flagged for suspicious responses. Out of the 99 total participants, 44 expressed interest in taking part in a follow-up interview. All 44 people were contacted by the principal investigator to schedule an interview. 3 participants completed the follow-up interview.

### **Survey Findings: Research Question # 2**

In total, 99 TAY completed the online survey. Of these, the majority identified as female ( $n = 66$ ; 66.7%) and non-Hispanic White ( $n = 63$ , 63.6%). A large majority ( $n = 80$ , 80.8%) reported having experienced at least four of the items on the Adverse Childhood Experience Questionnaire. The largest percentage of participants ( $n = 34$ , 34.3%) indicated living with a romantic partner/spouse. Approximately 1 in 5 respondents lived with their parents, 1 in 10 lived with other family members, and 1 in 10 lived with their child(ren). Overall, 16.2% ( $n = 16$ ) lived with roommates or friends. Table 1 displays the demographics of the sample.

**Table 1.***Sample Characteristics (N = 99)*

	<i>N</i>	%
<b>Race</b>		
Non-Hispanic White	63	63.6%
Non-Hispanic Black	12	12.1%
Hispanic	22	22.2%
Native American	1	1%
Asian	1	1%
Prefer not to say	1	1%
<b>TAY gender</b>		
Male	31	31.3%
Female	66	66.7%
Other	1	1%
Prefer not to say	1	1%
<b>Household composition</b>		
Live with parent(s) (rent-free)	22	22.2%
Live with other family members (rent-free)	11	11.1%
Live with a romantic partner/spouse	34	34.3%
Live with roommate(s) or friend(s)	16	16.2%
Live with child(ren)	10	10.1%
Rent an apartment or house	17	17.2%
Own a house	5	5.1%
Live alone	2	2%
Other	1	1%
<b>Traditional ACE score</b>		
1	1	1%
2	4	4%

	3	14	14.1%
	4+	80	80.8%
<b>Expanded ACE score</b>			
	1	0	0%
	2	2	2%
	3	0	0%
	4	10	10.1%
	5	5	5.1%
	6	2	2%
	7 to 9	13	13.1%
	10 to 12	33	33.3%
	13 to 15	23	23.2%
	14 to 18	11	11.1%
<b>Attachment style</b>			
	Secure	22	22.2%
	Preoccupied	20	20.2%
	Dismissive	14	14.1%
	Fearful	43	43.4%
<b>MHC-SF</b>			
	Languishing	44	44.4%
	Moderate	35	35.4%
	Flourishing	20	20.2%
		<i>M</i>	<i>SD</i>
	<b>Traditional ACE score (continuous)</b>	5.75	1.98
	<b>Expanded ACE score (continuous)</b>	10.69	4.00

Note: † reflects a variable that was not mutually exclusive.

The highest percentage of participants had a fearful attachment style ( $n = 43, 43.4\%$ ), and had languishing mental health ( $n = 44, 44.4\%$ ). The minority of survey respondents ( $n = 20,$



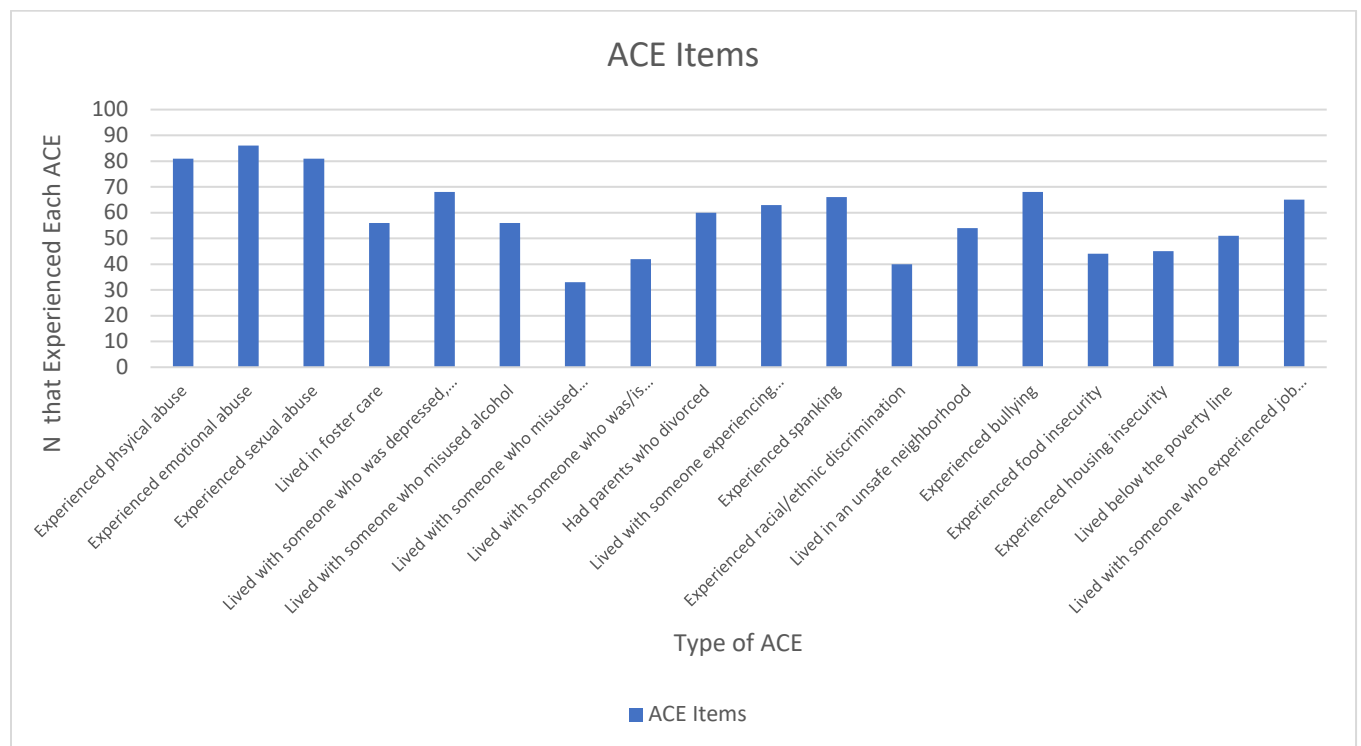
20.2%) had flourishing mental health at the age of 18-26 after experiencing child maltreatment.

Given the high average ACE and expanded ACE scores among respondents, we conducted a supplementary analysis to observe the frequencies of each individual ACE item experienced.

Figure 1 displays the number of respondents who reported experiencing each individual ACE item.

### Figure 1.

*Sample Characteristics (N = 99)*



As seen in Figure 1, the sample reflects a population with a high average for both traditional ACE score and expanded ACE score. As one of the inclusion criteria was having experienced maltreatment; thus, it was expected that most participants had experienced at least one ACE item. However, the number of those who experienced physical abuse ( $n = 81, 81.8\%$ ),

emotional abuse ( $n = 86, 86.8\%$ ), and sexual abuse ( $n = 81, 81.8\%$ ) having a higher prevalence than all other ACE items was a notable finding.

### Attachment Style, ACE SCORE, and Flourishing Mental Health/Wellbeing

Table 2 displays the results of the chi-squared, t-tests, and one-way anovas to examine bivariate relationships between attachment score and mental health, and ACE score and mental health.

**Table 2.**

#### *Flourishing Mental Health by Covariates*

	Mental Health			$X^2$
	Languishing	Moderate	Flourishing	
<i>Attachment style</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	
Secure	10 (45.5%)	7 (31.8%)	5 (22.7%)	0.19
Preoccupied	5 (25%)	12 (60%)	3 (15%)	6.77*
Dismissive	6 (42.9%)	5 (35.7%)	3 (21.4%)	0.02
Fearful	23 (53.5%)	11 (25.6%)	9 (20.9%)	3.47
<i>ACE Score (Traditional)</i>				5.48
1	1 (100%)	0 (0%)	0 (0%)	
2	1 (25%)	2 (50%)	1 (25%)	
3	3 (21.4%)	7 (50%)	4 (28.6%)	
4+	39 (48.8%)	26 (32.5%)	15 (18.7%)	
<i>ACE Score (Expanded)</i>				31.99**
1	0 (0%)	0 (0%)	0 (0%)	
2	1 (50%)	1 (50%)	0 (0%)	
3	0 (0%)	0 (0%)	0 (0%)	
4	4 (40%)	4 (40%)	2 (20%)	
5	0 (0%)	3 (60%)	2 (40%)	
6	0 (0%)	0 (0%)	2 (100%)	
7 to 9	4 (30.8%)	4 (30.8%)	5 (38.4%)	
10 to 12	12 (36.4%)	14 (42.4%)	7 (21.2%)	
13 to 15	12 (52.2%)	9 (39.1%)	2 (8.7%)	
14 to 18	11 (100%)	0 (0%)	0 (0%)	
<i>TAY Gender</i>				10.53 <sup>a</sup>
Male	11 (35.4%)	10 (32.2%)	10 (32.2%)	
Female	33 (50%)	24 (36.4%)	9 (13.6%)	
Other	0 (0%)	0 (0%)	1 (100%)	

Prefer not to say	0 (0%)	1 (100%)	0 (0%)	
<i>Race/ethnicity</i>				
Non-Hispanic White	25 (39.7%)	24 (38.1%)	14 (0.2%)	2.08
Non-Hispanic Black	6 (50%)	5 (41.6%)	1 (0.3%)	1.07
Hispanic	12 (54.5%)	6 (27.3%)	4 (18.2%)	1.22
Native American	1 (100%)	0 (0%)	0 (0%)	1.24
Asian	0 (0%)	0 (0%)	1 (100%)	4.2
<i>Living Arrangement</i>				
Live with parent(s) (rent-free)	10 (45.4%)	6 (27.2%)	6 (27.2%)	1.22
Live with other family members (rent-free)	8 (72.7%)	1 (9.1%)	2 (18.2%)	4.66 <sup>a</sup>
Live with a romantic partner/spouse	19 (55.8%)	11 (32.3%)	4 (11.7%)	3.48
Live with roommate(s) or friend(s)	3 (18.7%)	5 (31.2%)	8 (50%)	11.31 <sup>**</sup>
Live with child(ren)	3 (30%)	6 (60%)	1 (10%)	3
Rent an apartment or house	4 (23.5%)	9 (53%)	4 (23.5%)	3.92
Own a house	2 (40%)	3 (60%)	0 (0%)	1.99
Live alone	1 (50%)	0 (0%)	1 (50%)	1.63
Other	1 (100%)	0 (0%)	0 (0%)	1.26
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>f</i>
Traditional ACE score	6.36 (2.09)	5.45 (1.83)	4.95 (1.63)	4.391
Expanded ACE score	12.31 (4.15)	9.8 (3.52)	8.7 (3.07)	7.965

Note. <sup>a</sup> $p < .10$ ,  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$ . <sup>a</sup> $p$  denotes approaching significance

The first finding to note is that there is a bivariate relationship of those with a preoccupied attachment style and moderate mental health ( $n = 12$ , 60%). The majority of respondents who have a fearful attachment style scored as having languishing mental health ( $n = 23$ , 53.5%). This also accounts for 23.2% of the total sample. There was no significant effect of attachment style on mental health in participants between 18 and 26 years of age. There was a significant difference in the proportion of respondents who had high expanded ACE scores and languishing mental health compared to those who had moderate or flourishing mental health ( $\chi^2 = 31.99$   $p < .01$ ). Those who lived with roommates or friends had a higher prevalence of flourishing mental health than any other household composition.

The traditional and expanded ACE scores were entered as continuous variables. A one-way ANOVA was used to calculate the average ACE and expanded ACE scores for each mental

health category. Those with languishing mental health had a mean traditional ACE score of 6.36, whereas those with flourishing mental health had a mean score of 4.95. For the expanded ACE score, those with languishing mental health had a mean score of 12.31 and those with flourishing mental health had a mean score of 8.7. The mean for both traditional and expanded ACE score goes down as mental health increases.

Table 3 presents the results from the multivariable analyses to examine relationships among attachment style, ACE score, and mental health after controlling for other factors.

**Table 3***Multinomial Regression: Flourishing Mental Health, Attachment, and Traditional ACE Score (n = 99)*

	Model 1 (Unadjusted model)		Model 2 (Adjusted model)		Model 3 (Adjusted + interaction)				
	<i>Exp(B)</i>	CI <sub>95%</sub> for <i>Exp(b)</i>	<i>Exp(B)</i>	CI <sub>95%</sub> for <i>Exp(b)</i>	<i>Exp(B)</i>	CI <sub>95%</sub> for <i>Exp(b)</i>			
		Lower	Upper		Lower	Upper		Lower	Upper
<i>Languishing mental health</i>									
Traditional ACE score	1.46	1.1	1.95	1.448	1.077	1.948	0.81	0.51	1.28
Attachment style (secure)									
Preoccupied	1.2	0.2	7.18	0.654	0.097	4.386	0.27	0.03	2.39
Dismissive	1	0.17	5.77	0.818	0.13	5.155	0.63	0.08	4.85
Fearful	0.78	0.2	2.93	0.557	0.133	2.336	0.3	0.05	1.71
Living with partner	0.32	0.09	1.14	0.335	0.89	1.263	0.29	0.06	1.29
<i>Moderate mental health</i>									
Traditional ACE score	1.13	0.86	1.5	1.175	0.876	1.577	0.71	0.44	1.15
Attachment style (secure)									
Preoccupied	0.35	0.06	1.93	0.255	0.043	1.514	0.12	0.01	0.98
Dismissive	0.84	0.13	5.26	0.776	0.12	5.011	0.77	0.09	6.29
Fearful	1.14	0.27	4.86	0.919	0.206	4.113	0.61	0.11	3.41
Living with partner	0.54	0.14	2.01	0.481	0.122	1.891	0.53	0.11	2.45
<i>Interaction</i>									
Female x ACE score							1.55	1.14	2.11
Foster care x ACE score							1.46	1.07	1.98

Note. Fit for adjusted model pseudo- $R^2 = .18$ , *Chi-Squared* (10) = 17.97,  $p = 0.05$ . Fit for adjusted + interaction model pseudo- $R^2 = .31$ , *Chi-Squared* (14) = 31.17,  $p = 0.005$ . Reference group for dependent variable = flourishing mental health. Reference group for independent variables indicated in parentheses.

In the above table, flourishing mental health is the reference group. In Regression Model 2, with each 1 unit increase in traditional ACE score, the odds of a person having languishing mental health increased by 44% ( $Exp(B) = 1.44$ , CI 1.07-1.94). Model fit was significant, with the Chi-Squared (10) 17.97,  $p < .05$ . The Nagelkerke pseudo- $R^2$  value for the adjusted model was 0.18. This indicates that Regression Model 2 was able to predict 18% of the variance in flourishing mental health among transition-age youth. Attachment style and living with a romantic partner/spouse were deemed non-significant in relationship to mental health in Model 2.

Table 4 presents the results from the multivariable analyses to examine relationships among attachment style, expanded ACE score, and mental health after controlling for other factors.

**Table 4***Multinomial Regression: Flourishing Mental Health, Attachment, and Expanded ACE Score (n = 99)*

	Model 1 (Unadjusted model)			Model 2 (Adjusted model)			Model 3 (Adjusted + interaction)		
	<i>Exp(B)</i>	CI <sub>95%</sub> for <i>Exp(b)</i>		<i>Exp(B)</i>	CI <sub>95%</sub> for <i>Exp(b)</i>		<i>Exp(B)</i>	CI <sub>95%</sub> for <i>Exp(b)</i>	
		Lower	Upper		Lower	Upper		Lower	Upper
<i>Languishing mental health</i>									
Expanded ACE score	1.29	1.1	1.51	1.29	1.1	1.51	1.04	0.82	1.32
Attachment style (secure)									
Preoccupied	1.2	0.2	7.18	0.52	0.07	3.69	0.29	0.03	2.56
Dismissive	1	0.17	5.77	0.74	0.11	4.85	0.65	0.08	5.08
Fearful	0.78	0.2	2.93	0.47	0.1	2.13	0.33	0.06	1.84
Living with partner	0.32	0.09	1.14	0.32	0.08	1.25	0.34	0.08	1.44
<i>Moderate mental health</i>									
Expanded ACE score	1.07	0.93	1.23	1.09	0.94	1.26	0.85	0.67	1.08
Attachment style (secure)									
Preoccupied	0.35	0.06	1.93	0.25	0.04	1.51	0.13	0.01	1.02
Dismissive	0.84	0.13	5.26	0.82	0.12	5.27	0.79	0.09	6.5
Fearful	1.14	0.27	4.86	0.9	0.2	4.09	0.66	0.12	3.68
Living with partner	0.54	0.14	2.01	0.48	.12	1.9	0.61	0.13	2.74
<i>Interaction</i>									
Female x ACE score							1.4	1.06	1.84
Foster care x ACE score							1.3	0.98	1.73

Note. Fit for adjusted model pseudo- $R^2 = .24$ , *Chi-Squared* (10) = 24.29,  $p = 0.07$ . Fit for adjusted + interaction model pseudo- $R^2 = .33$ , *Chi-Squared* (14) = 33.28,  $p = 0.003$ . Reference group for dependent variable = flourishing mental health. Reference group for independent variables indicated in parentheses.

In the final regression models, there was a similar relationship between the expanded ACE score and mental health as we observed in the relationship between traditional ACE score and mental health. For every additional expanded ACE item experienced, the likelihood of having languishing mental health was 29% higher ( $Exp(B) = 1.29$ , CI 1.1-1.51). There were 18 expanded ACE items compared to the 9 included in the traditional ACE score. Model fit was approaching significance in this model ( $X^2(10) = 24.29$ ,  $p = .07$ ). The Nagelkerke pseudo- $R^2$  value for the adjusted model was 0.24. Attachment style and living with a partner or spouse were not significantly associated with mental health in these models.

### Supplementary Sub-Group Analysis

Considering the relatively low number of individuals from non-White or non-Hispanic racial groups who responded to the survey and the lack of significance in variables related to living arrangement, we ran a subgroup analyses to observe trends by respondent sex and foster care status. Results from this supplementary analysis are presented in Table 3, model 3.

In a subgroup analysis of sex and ACE score, it was discovered that for each 1-unit increase in traditional ACE score, females were 55% more likely than other sexes to experience languishing mental health ( $Exp(B) = 1.55$ , CI 1.14-2.11). The odds ratio decreased slightly when examining each 1-unit increase in expanded ACE score, with females found to be 40% more likely to experience languishing mental health than other sexes ( $Exp(B) = 1.4$ , CI 1.06-1.84). When exploring the relationship between ACE score and foster care status, we found that for each 1-unit increase in traditional ACE score, youth who were in foster care were 46% more likely than their peers (who were not in foster care) to experience languishing mental health ( $Exp(B) = 1.46$ , CI 1.07-1.98). This relationship was also prevalent in the subgroup analysis of foster care and expanded ACE score, as youth who were in foster care had a 30% increase in the



odds of experiencing languishing mental health compared to their peers who had not experienced foster care.

### **Research Question # 2: Lived Experiences among TAY**

To answer the second research question, three youth who completed surveys participated in an optional follow-up interview. 2 participants identified as white females and 1 participant identified as a black male. From the qualitative thematic analysis, 3 themes emerged that related to trajectories of mental health and wellbeing. This section of the results presents three main themes/three vignettes of individual experiences with these relationships.

#### ***Theme 1: Unstable Relationships***

One of the main identified themes in the three interviews was instability of relationships, both social and romantic. All three participants reported having difficulty creating close relationships with others that were healthy and stable. Interviewee #2 stated:

I had a really hard time making friends, I had like a group of friends, but it seemed like somebody was always like mad at me at some point for some reason. I dated a lot of people for like two weeks at a time. A lot of people who were very unsafe...”

Similarly, interviewee #3 indicated, “I think it was harder for me and took a little bit longer for me to realize when people were just using me versus authentic friendships and connection”. Interviewee #1 stated that there is an “initial hurdle” in creating new relationships, but their experiences in childhood have taught them how to quickly assess whether a new relationship is a positive or negative influence. Overall, the three participants expressed similar sentiments that their social and romantic relationships are influenced by their adverse childhood experiences.

***Theme 2: Low Self-Worth, Self-Image, & Self-Confidence***

A second salient theme that emerged in the interviews was low self-worth, self-image, and self-confidence. All three participants reported experienced varying levels of negative self-image and low self-worth throughout childhood and young adulthood. Interviewee #1 reported that they “had to start at zero with my self-worth and self-confidence as a teenager” and indicated they were not able to rely on parental or social relationships to support them in this way. Interviewee #2 indicated that they have experienced low self-worth due to a lack of parental and social support in childhood, which comes from “never being told that you can do it”. Interviewee #3 expressed that they were uncomfortable spending time alone due to their negative self-image and a desire to avoid those emotions. A lack of emotional and social support from caregivers or friends can create feelings of loneliness and self-doubt. Young adults who have experienced maltreatment may not have been able to receive social or emotional support from their parents, leading them to enter adulthood with a negative view of themselves and their capabilities.

***Theme 3: Silver Lining***

Throughout the three interviews, there was mention of a “silver lining” mentality regarding adverse childhood experiences – the idea that though their childhood experiences were difficult there were some positive results in their lives. Interviewee #1 states their childhood was “not the most stable, but there were some bright spots. It taught me a lot, but I am very glad to be out of that phase of life”. Interviewee #2 felt as though it has affected their identity, saying, “I also feel like I wouldn't be the person that I am if I didn't go through it all”. Interviewee #3 likened the “silver lining” experience to gaining resilience, stating, “I am a resilient person. I went through a lot emotionally, physically and stuff as a kid but I was able to make it through.”

### Discussion

In this study, we explored the lived experience of young adults who had experienced maltreatment and the relationship between attachment style and overall well-being of youth transitioning to adulthood. Notably, in the bivariate relationships, there was only a relationship only between preoccupied attachment style and languishing mental health. According to the literature, preoccupied attachment styles carry anxiety about perception and close relationships, having trouble with self-confidence. According to the literature, this experience is expected as those who have experienced child maltreatment as they can experience low self-image and instable relationships (Calheiros et al., 2020). A high percentage of respondents had both a fearful attachment style and experienced languishing mental health (23.2%). However, no other attachment style displayed a significant relationship with well-being/mental health.

It is worth noting that transition-age youth in this study had higher than average ACE scores overall, with a mean traditional ACE score of 5.75 and a mean expanded ACE score of 10.69. As the inclusion criteria required respondents to have experienced some form of child maltreatment, it is not surprising that the sample had a high average in both areas. However, it is of interest that over 80% of respondents experienced either emotional abuse, physical abuse, or sexual abuse. Therefore, respondents in this study likely experienced more severe and accumulated exposure to maltreatment. This could have affected the relationship between attachment style and mental health, as a high percentage of youth in our sample had a fearful attachment. It is also possible that the attachment styles through the Revised Adult Attachment Scale may need to be adjusted for transition-age youth, who are often at the cross roads between having parents or caregivers as the main sources of attachment and romantic partners or friends. As they gain a new main source of attachment, the relationship with their parents changes. The

increase in personal freedom and introduction of new partners and friends for the youth can deepen the bond with parents as they develop communication as adults (Bohn et al., 2019). This time period involves a great deal of change, including moving away from home, forming a new social network in a new environment, and creating plans for the future as an adult. Attachment styles affect how young adults experience intimate relationships, hope for the future, and satisfaction with their life (Booker et al., 2021).

In relation to mental health and well-being, it was hypothesized that a lower ACE score (traditional or expanded) would correlate with a higher level of well-being. This was confirmed by the data collected and analyzed. Experiences of maltreatment, particularly psychological, attributes to the development of negative self-image that carries into young adulthood and affects a person's ability to endure stressful situations or have conflict in close relationships (Arslan et Genç, 2022). Unstable relationships and inability to deal with stress affect how emotionally, socially, and psychologically well a young adult feels during the transition to adulthood. While there was a high percentage of respondents who lived with a romantic partner/spouse ( $n = 34$ , 34.3%), this did not have a significant relationship with well-being or attachment style. However, there was a significant bivariate relationship between mental health and living with roommates or friends. While this was not the reference variable for household composition, it is important to note that the presence of social support within the home has a positive effect on mental health. Social support from friends and family improves self-image which can be negatively affected by experiences of child maltreatment (Khrapatina & Berman, 2017). During this age range, social support is even more important as it can act as a protective factor when a young adult encounters stressful life events (Pocnet et al., 2016). If a person has a positive social

support in the home, they have more regular contact with them which can increase the effects on well-being.

The other notable finding was that gender and foster care history moderated the relationship between ACE score and mental health. The role of gender in this relationship could relate to the difference in coping strategies that women and men have. During the transition to adulthood, females with higher ACE scores lean more towards internalizing the problems they are faced with while men externalize this behavior. Internalizing behaviors such as suicidal ideation and decreased sleep affect well-being in females more significantly than externalizing problems such as substance misuse (Grigsby et al., 2020). It is possible that this difference in well-being between males and females is associated with the societal gender roles and expectations. Females entering young adulthood face more difficulty with body image and social relationships that increases psychological distress levels (Johansen et al., 2021). Males report less perceived stress during this time frame from school and societal pressures than females (Wiklund et al., 2012), which could be explained by the age pattern of females that predicts the peak of mental distress in females occurs between eight to ten years earlier than it does for males (Johansen et al., 2021). Females and males with an ACE score above four have over twofold increased likelihood of experiencing heightened perceptions of stress (Bruskas & Tessin, 2013). Females who were in foster care during childhood also experience a correlation between their ACE score and psychological distress that affects mental health. Regarding foster care involvement's moderation of ACE score and mental health, there is the consideration of the intent and impact of the foster care system. Foster care placement is designed to protect the child and work towards family reunification if at all possible. One contributing factor to the decreased mental health in young adults who experienced foster care placement is that they typically have

experienced some form of child maltreatment pre-placement. In a study of ACE score previous to foster care placement and during, the most common type of maltreatment reported in both categories was psychological maltreatment (Bruskas & Tessin, 2013). The experience of foster care can be disrupting for a child as they are removed from their familiar environment and attempt to create an attachment with their new caregiver (Bruskas & Tessin, 2013), though many report feeling safer in foster care than with their previous caregivers (Barth et al., 2022).

### **Limitations**

This study has limitations in the measurement tools, such as how the ACE questionnaire does not score for experiencing bullying or poverty. These areas of adverse experience are captured in additional questions included by the research team. These experiences can attribute to the adversity faced as a child and can leave lasting impacts on a child. The Revised Adult Attachment Scale and the MHC-SF both focused on current feelings rather than past experiences. This allowed the research team to collect a substantial amount of data for each participant and create a rough timeline with the data collected. However, there was no assessment of attachment style over time as there was no baseline established of what attachment style the participant had as a child. As the study focused on the current experience of transition-age young adults, the participant's original attachment style was less important but would be beneficial to have for comparison of outcomes. It could further indicate which intervention methods are highly effective over those that are only somewhat effective.

The study has broad inclusion criteria which allowed for a fairly large pool of participants. The survey was taken electronically which could limit some individual's ability to participate due to little technology access. Finally, we only conducted interviews with three of the TAY who completed the survey; therefore, findings are not necessarily transferable.

## **Implications**

While there is a general knowledge among social workers regarding which types of interventions are best suited for different types of clients, there is a need in the community for this knowledge to be applied specifically to child maltreatment.

An understanding of the relationship between attachment style, child maltreatment experiences, and well-being could inform social worker's choices for assessment and treatment. The sample for this study had a high percentage of languishing mental health and fearful attachment style. As all participants had experienced at least 1 ACE item, it suggests that screening for ACE's in transition-age youth can provide information about their overall well-being. Further research on how different ACE items affect well-being specifically could inform how social workers provide treatment and resources to transition-age youth depending on their specific experiences. The impact of structural ACE's such as poverty and racial discrimination could be assessed for impact independent of maltreatment factors. Not all child maltreatment cases are the same and should not be treated as such. The type of abuse, age, and reoccurrence are all contributing factors to a person's trauma. Thus, future research could develop and pilot specific interventions to serve youth exposed to different ACEs, focusing on developing flourishing mental health and improving well-being.

Attachment style during the transition to adulthood is in a state of change as youth find a new main source of attachment in romantic partners rather than their caregivers. They experience a new environment and build a new social support system. As there are many changes happening in their close relationships, attachment style could require more nuanced examination to be properly assessed. The presence of a positive social support in the household indicated more

positive mental health which leaves more to be understood about how social support in the transition to adulthood is influenced by attachment style or vice versa.

Foster care should be considered in all cases of transition age youth who are experiencing languishing mental health. The experience of foster care indicates a higher likelihood for a lack of well-being in the transition to adulthood. This relationship is important for social workers to understand as it informs them about a transition-age youth's support network and types of intervention that would be most effective.

A factor that should also be considered in the application of this research is the availability of mental health services and support available to transition-age youth. As they move away from their parents, attend school and/or begin working in their career field, their access to quality healthcare can fluctuate. The relationship with their caregivers and socioeconomic status can influence their access to care as they may or may not have health insurance. On college, campuses there are social support groups and clinics that are either free or low-cost, but are limited in their ability to provide more intensive or long-term care. As transition-age youth try to secure financial stability for themselves, they may not be able to pay for care that is beneficial to them and their well-being.



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## Appendix A

### Online Survey

E-mail Address:

Age

1. Under 18
2. 18-26
3. 27 or older

The Federal Child Abuse Prevention and Treatment Act (CAPTA) (42 U.S.C.A. § 5106g), as amended by the CAPTA Reauthorization Act of 2010, defines child abuse and neglect as, at minimum: "Any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation"; or "An act or failure to act which presents an imminent risk of serious harm." This can include things such as emotional abuse, verbal abuse, physical abuse, sexual abuse, grooming [the act of deliberately establishing an emotional connection with a child to prepare the child for sexual abuse], neglect, living with a parent/guardian who deals with substance abuse, referral to CPS, anything that leads to a foster care entry, etc.

Please answer the following questions about your childhood experiences:

	Yes	No
Did a parent or adult in the home ever hit, beat, kick, or physically hurt you in any way (do not include spanking)?	<input type="checkbox"/>	<input type="checkbox"/>
Did a parent or adult in your home ever swear at you, insult you, or put you down?	<input type="checkbox"/>	<input type="checkbox"/>
Did anyone at least 5 years older than you or an adult ever touch you sexually?	<input type="checkbox"/>	<input type="checkbox"/>
Were you ever in foster care?	<input type="checkbox"/>	<input type="checkbox"/>

Based on the previous definitions and questions, have you experienced child maltreatment?

1. Yes
2. No

What state do you reside in?

1. Alabama
2. Alaska
3. Arizona
4. Arkansas
5. California

6. Colorado
7. Connecticut
8. Delaware
9. Florida
10. Georgia
11. Hawaii
12. Idaho
13. Illinois
14. Indiana
15. Iowa
16. Kansas
17. Kentucky
18. Louisiana
19. Maine
20. Maryland
21. Massachusetts
22. Michigan
23. Minnesota
24. Mississippi
25. Missouri
26. Montana
27. Nebraska
28. Nevada
29. New Hampshire
30. New Jersey
31. New Mexico
32. New York
33. North Carolina
34. North Dakota
35. Ohio
36. Oklahoma
37. Oregon
38. Pennsylvania
39. Rhode Island
40. South Carolina
41. South Dakota
42. Tennessee
43. Texas
44. Utah
45. Vermont
46. Virginia
47. Washington
48. West Virginia
49. Wisconsin
50. Wyoming

What county do you reside in?

What is your sex?

1. Male
2. Female
3. Transgender
4. Other
5. Prefer not to disclose

Which of the following racial/ethnic groups do you identify as? Select all that apply.

1. Non-Hispanic White
2. Non-Hispanic Black/African American
3. Hispanic
4. American Indian and Alaska Native
5. Asian
6. Other
7. Prefer not to answer

What is your sexual orientation?

1. Heterosexual
2. Gay/Lesbian
3. Bisexual
4. Asexual
5. Other
6. Prefer not to disclose

What best describes your current living situation? Select all that apply.

1. Live with parent(s)/guardian(s) (rent-free)
2. Live with other family members (rent-free)
3. Live with a romantic partner/spouse
4. Live with roommate(s) or friend(s)
5. Live with my child/children
6. Rent an apartment or house
7. Own a house
8. Live by myself
9. Other

What best describes the relationship status of your biological parents?

1. Married
2. Separated
3. Divorced

4. Never married
5. I don't know
6. Other

What is your current relationship status?

1. Married
2. Separated
3. Divorced
4. Never married
5. Other

Are you currently pregnant?

1. Yes
2. No
3. I don't know

How many biological children do you have?

1. 0
2. 1
3. 2
4. 3
5. 4 or more

What is the highest level of education you have completed?

1. Less than high school
2. High school graduate/GED
3. Some college or associate degree
4. Bachelor's degree
5. Postbachelors degree

What is your current education status?

1. Attending community college
2. Attending a public college/university
3. Attending a private college/university
4. Attending Trade School
5. None
6. Other

Please check the box to proceed with the survey.

What is your best estimate of your total household income from all sources?

1. Under \$20,000
2. \$20,000 - \$39,999
3. \$40,000 - \$59,999
4. \$60,000 - \$79,999
5. \$80,000 and above
6. I don't know
7. Prefer not to answer

What is your current employment status?

1. Employed full-time
2. Employed part-time
3. Self-employed
4. Retired
5. Unemployed
6. Stay-at-home parent
7. Full-time student
8. Other (please specify)

How did you access this survey?

1. Personal Computer/Laptop
2. Personal Smartphone/Tablet
3. Shared Computer/Laptop
4. Shared Smartphone/Tablet
5. Public computer (ex. at the library)
6. Other

Is anyone assisting you in completing this survey?

1. Yes
2. No
- 3.

This section will ask questions about your exposure to adverse experiences in your childhood (before age 18).

	Yes	No
Did you live with anyone who was depressed, mentally ill, or suicidal?	<input type="checkbox"/>	<input type="checkbox"/>
Did you live with anyone who was a problem drinker?	<input type="checkbox"/>	<input type="checkbox"/>
Did you live with anyone who used illegal street drugs or abused prescription medication?	<input type="checkbox"/>	<input type="checkbox"/>
Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?	<input type="checkbox"/>	<input type="checkbox"/>
Were your parents separated or divorced?	<input type="checkbox"/>	<input type="checkbox"/>
Did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?	<input type="checkbox"/>	<input type="checkbox"/>
Did a parent or adult in the home ever spank you?	<input type="checkbox"/>	<input type="checkbox"/>

Did anyone at least 5 years older than you or an adult try to make you touch them sexually?	<input type="checkbox"/>	<input type="checkbox"/>
Did an adult or anyone at least 5 years older than you force you to have sex?	<input type="checkbox"/>	<input type="checkbox"/>
Did you experience racial/ethnic discrimination?	<input type="checkbox"/>	<input type="checkbox"/>
Did you live in an unsafe neighborhood?	<input type="checkbox"/>	<input type="checkbox"/>
Did you experience bullying?	<input type="checkbox"/>	<input type="checkbox"/>
Did you ever experience food insecurity?	<input type="checkbox"/>	<input type="checkbox"/>
Did you ever experience housing insecurity?	<input type="checkbox"/>	<input type="checkbox"/>
Did you ever live below the poverty line?	<input type="checkbox"/>	<input type="checkbox"/>
Did a parent or another adult living in the home experience job insecurity?	<input type="checkbox"/>	<input type="checkbox"/>

In the event that you experience psychological distress from answering these questions, please visit the National Alliance for Mental Illness (NAMI) at [www.nami.org](http://www.nami.org) or call the NAMI HelpLine at 1-800-950-NAMI (6264) from 10 a.m. to 10 p.m. ET, Monday through Friday.

Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. Please think about all your relationships (past and present) and respond in terms of how you generally feel in these relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel. (Revised Adult Attachment Scale, Collins, 1996) Please use the scale below by selecting a number between 1 and 5 below.

	1 (Not at all characteristic of me)	2	3	4	5 (Very characteristic of me)
I find it relatively easy to get close to people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find it difficult to allow myself to depend on others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often worry that romantic partners don't really love me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find that others are reluctant to get as close as I would like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am comfortable depending on others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't worry about people getting too close to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find that people are never there when you need them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am somewhat uncomfortable being close to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often worry that romantic partners won't want to stay with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





of your daily life						
That you had warm and trusting relationships with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
That you had experiences that challenged you to grow and become a better person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confident to think or express your own ideas and opinions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
That your life has a sense of direction or meaning to it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please describe how you see your well-being and what the contributing factors are to your well-being.

Would you be interested in participating in a follow-up interview?

1. Yes
2. No

## Appendix B

### Interview Guide

#### **Research Objective**

To understand and assess the well-being of transition-age youth who have experienced child maltreatment.

#### **Introduction**

1. Review consent form
2. Get consent to audiotape

#### **Questions**

*NOTE: These questions are a guide. Prompting questions can be asked depending on the participant responses*

1. Please tell me a little bit about yourself to begin.
2. How would you describe your childhood?
  - a. Your relationship with your parents/guardians?
  - b. Your social life?
  - c. Education?
  - d. Security?
3. How, if at all, do you think your adverse childhood experiences have affected your relationships?
  - a. How has this changed over time, if at all?
  - b. How would you describe your ability to create close relationships with others?
4. When you hear the term “well-being”, what do you think of?
  - a. How do you view your own well-being? What aspects of your life does that pertain to?
  - b. How do you think your childhood experiences have shaped your current mental, emotional, and physical health?
5. Is there anything else you would like to share?