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Resilience, Childhood Trauma History, and Foster Care Experience in College Students

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Resilience, Childhood Trauma History, and Foster Care Experience in College Students

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Resilience, Childhood Trauma History, and Foster Care Experience in College Students

Chapter I: Introduction

It is estimated that 60% of all adults in the United States have experienced at least one significant childhood trauma event (U.S. Department of Health & Human Services, Administration for Children and Families, Children's Bureau, 2019). A significant trauma event is categorized as the experience of an event that is emotionally painful or distressful, often resulting in lasting mental and physical effects (Substance Abuse and Mental Health Services Administration, 2017). Exposure to traumatic events in childhood leads to a variety of immediate threats to the child, such as injury and death, violation of physical integrity, extreme emotional turmoil (American Psychiatric Association [APA], 2013), and decreased academic functioning (Daignault & Hebert, 2009). In addition to immediate threats to self, there are also long-lasting negative effects of childhood trauma. Adults with multiple traumatic childhood experiences are more likely than adults with less trauma exposure to suffer from substance abuse, depression, heart disease, and cancer. In addition, they are more likely to engage in risky behaviors such as smoking (Felliti et. al., 1998) and drop out of college before receiving their degree (Duncan, 2000). Overall, as traumatic events in childhood increase, so do the risks for multiple negative outcomes (Substance Abuse and Mental Health Services Administration, 2017).

Some individuals are able to successfully cope with their childhood trauma experiences. These individuals display resilience, as they can "bounce-back" after experiencing adversity. Resilience has been defined as "the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development" (Masten, 2014). Higher levels of resilience in some individuals may be due to the cumulative effects of protective factors. Protective factors that have been shown to foster resilience in children include nurturing

parents, family stability, and connections with adults (Turner et al., 2012). In adulthood, protective factor that foster resilience include self-esteem, a sense of safety, positive outlook, social support, and spirituality (Maschi et al., 2013).

A population where resilience is highly valued, if not needed for survival, are foster children. Foster children have been removed from their family's care, placed into the care of the state, and then placed with foster families who are paid to be their primary caregivers. Separation from parents is extremely traumatizing and equally as traumatizing as the death of a parent (Agid et al., 2000). Removal of a child from their family typically happens for reasons that pose immediate safety risks. Safety risks can range from abuse, neglect, parental substance abuse, unsuitable living conditions, parental mental illness, family violence, or the absence of parents (Lohr & Jones, 2016). For these reasons, children who are or have been in foster care are at risk for experiencing a variety of negative health and behavior outcomes. Most of the negative outcomes experienced by individuals who have been in foster care mirror the outcomes experienced by children who have been exposed to trauma. Specially, both groups experience increased rates of social problems, substance abuse, and mental health problems (Felliti et. al., 1998; Zlotnick et al., 2012).

In addition to negative health and behavior outcomes, foster children are also in a uniquely challenging position academically. Frequent placement changes often result in a change of schools and cause disrupted learning throughout their K-12 education (Morton, 2018; Ward, 2009). As foster children get older and emancipate from foster care, they are left to make the decision of continuing their education on their own, often without financial or moral support (Courtney & The Society for Research in Child Development, 2009; Morton, 2018; Simmonds, 2018). Without support, the transition from primary to secondary education becomes more of an

obstacle. In research, former foster care students enrolled in college reported that uncontrolled mental health issues and poor emotion regulation skills were barriers to their success at school (Morton, 2018).

This project will integrate and compare the trauma history and resilience skills of students with childhood trauma and/or foster care experiences. College is a difficult transitional time in life for most students, but for those with traumatic pasts it can be especially difficult. Previous research has examined either students who have been in foster care or students with childhood trauma, but less is known about the commonalities and differences the two populations may share. Additionally, research has highlighted some of the top struggles that students who have been in foster care (Batsche, et al., 2014) and students with severe trauma (Banyard & Cantor, 2004) face when transitioning to college. What is missing in the research is information about what supports would be helpful for these at-risk populations to increase their academic success. This project will examine how to help these students by assessing their common academic resilience skills to inform what future interventions or supports would be useful to these populations on college campuses.

Chapter II: Literature Review

Childhood Trauma and Negative Health Outcomes

Childhood trauma occurs frequently, with more than two thirds of children having experienced a traumatic event by the age of 16 (Substance Abuse and Mental Health Services Administration, 2017). Therefore, it is estimated that 60% of all adults in the United States have experienced at least one significant childhood trauma event (U.S. Department of Health & Human Services, Administration for Children and Families, Children's Bureau, 2019). A significant trauma event is categorized as the experience of an event that is emotionally painful or distressful, often resulting in lasting mental and physical effects (Substance Abuse and Mental Health Services Administration, 2017). Childhood traumatic events come with the threat of injury or death, violations of the physical integrity of self or others, and they often result in extreme emotional turmoil at the time of exposure (American Psychiatric Association [APA], 2013).

A commonly used measure of childhood trauma severity is the 1998 Adverse Childhood Experiences (ACE) questionnaire (Felliti et. al., 1998). The questionnaire is made up of ten items addressing three main categories. The categories are as follows: a) Abuse: emotional, physical, or sexual; b) Household challenges: parental substance abuse, mental illness of a family member in the household, parental separation, violence to mother, and having a household member in prison; and c) Neglect: child has unmet emotional or physical needs and abandonment. An individual's ACE score is comprised of the sum of all three categories.

The original ACE study was conducted from 1955 to 1997 (Felliti et. al., 1998). Over 17,000 participants were assessed for adverse childhood events, as well as surveyed about their current health and behaviors at two data collection points. This expansive study showed that

across all populations polled, ACEs are common, with an ACE score of at least one being reported by over half of the participants. One fourth of the participants reported two or more adverse experiences and one in five participants reported three or more ACEs. Additionally, outcomes of multiple trauma experiences predicted negative well-being and health outcomes providing evidence for a dose-response relationship (Felliti et. al., 1998). Adults who had experienced four or more adverse childhood events were four to twelve times more likely to experience increased rates of alcoholism, drug abuse, depression, and suicide attempts than adults with zero adverse childhood events. Also, those who reported four or more adverse childhood events were two to four times more likely to smoke, and have a poorer view of self-health, more than fifty sexual partners, and sexually transmitted diseases. Results of the ACEs study also show that as exposure to adverse childhood events increase, so does the presence of life-threatening diseases such as heart disease, cancer, bone fractures, liver disease, and lung disease (Felliti et. al., 1998). The relationship between the amount of exposure to abuse and household dysfunction to negative health risks in adulthood is particularly concerning due to these increased health risk factors being some of the leading causes of adult death in the United States (Felliti et. al., 1998).

Felliti and colleagues' (1998) findings are corroborated by a strong research base linking trauma and chronic stress to increased physical health consequences. Researchers using the ACE questionnaire examined whether experiencing a single trauma event would predict negative health outcomes (D'Andrea et al., 2011). Findings showed that many of the physical systems in the body are negatively affected by one traumatic event. The gastrointestinal tract, the cardiovascular system, immune functioning, the reproductive system, neuroendocrine functioning, the musculoskeletal system, and brain structures were all found to be significantly

affected by trauma exposure, causing symptoms, as well as increased risk, for the onset of future health disorders and diseases. Psychological systems have also been shown to be affected, with anxiety, depression, and PTSD risk increasing due to trauma exposure. These psychological disorders have been shown to be long lasting and resistant to treatment.

Additionally, psychological consequences of trauma can increase risk for and exacerbate the physical consequences discussed above. Elevated physiological stress coming from internal and external triggers can greatly impair an individual's functioning. As a result, it can be challenging to maintain baseline functioning in social or occupational activities after being exposed to trauma (D'Andrea, et al., 2011). The negative consequences of childhood trauma expand over many aspects of physical and mental wellbeing. With at least 60% of adults in the United States having experienced at least one childhood traumatic event (U.S. Department of Health & Human Services, Administration for Children and Families, Children's Bureau, 2019), childhood trauma is an important area of research to be further studied.

The findings of past research using the ACE questionnaire continue to be applicable today. In the most recent report published by the Centers for Disease Control and Prevention, experiencing one or more traumatic experiences as outlined by the ACEs questionnaire was linked to the lead causes of adult illness and death in the United States (Merrick et al., 2019). The study surveyed 144,017 adults in 25 U.S. states, asking about trauma history using the ACEs questionnaire, as well as health and socioeconomic outcomes experienced. It was found that over half of the participants (60.9%) experienced at least one adverse childhood experience and 16%, or one in six participants, experienced four or more types of adverse childhood experiences. Those that reported four or more types of ACEs were significantly more likely to experience negative health outcomes, partake in health risk behaviors, and experience socioeconomic

adversity. Participants with the most trauma exposure were 1.2 times more likely to be overweight and 2.8 times more likely to have heart disease than those who reported no trauma exposure. Similarly, those with the most trauma exposure were around 5.5 times more likely to have depression, 3.1 times more likely to be a smoker, 1.8 times more likely to be a heavy drinker, and 1.7 times more likely to experience socioeconomic adversity, including unemployment (Merrick et al., 2019). These findings suggest that the prevention of adverse childhood experiences could greatly decrease the impact that they have in health, social, and economic domains. When these increased risks are applied to the 2017 CDC national estimates, preventing adverse childhood experiences potentially decreases the number of individuals who are overweight or obese by 2.5 million, heart disease cases by 1.1 million, and depression by 21 million cases, in addition to increasing high school graduation rates by 1.5 million students (CDC, 2017).

Secondary Trauma

Unfortunately, the negative outcomes that result from childhood trauma affect more than just the individual who experienced the traumatic event. The individual’s partner(s), children, and other family members often endure residual effects. The general conclusion is similar regardless of the type or the original source of trauma. Findings in literature indicate that individuals who experience secondary trauma are also at risk for depression, anxiety, psychosomatic problems, aggression, and guilt (Felsen, 1998).

Children who experience secondary trauma through their mothers are at risk for several negative outcomes, such as strained parent-child relationships, delayed growth (Choi et. al., 2017), strained peer relationships, and behavior problems (Roberts et al., 2004). In a study of expectant mothers, those with childhood trauma were more likely to develop postpartum

depression than mothers without childhood trauma. Furthermore, mothers with postpartum depression experienced more struggles with mother-child bonding, and their children also exhibited delayed growth (Choi et. al., 2017). Children of mothers with childhood sexual abuse experiences are more likely to have peer problems, behavior regulation issues, conduct disorder, and emotional problems compared to children of mothers without childhood sexual abuse experiences. Additionally, mothers with childhood sexual abuse experiences encountered parenting problems. Specifically, there is a direct association between the parenting aspect of maternal confidence and childhood sexual abuse (Roberts, et al., 2004). These findings suggest ways in which trauma from one generation can affect the next generation. Secondary trauma has the potential to contribute to a cycle of adversity, meaning that those affected by trauma will continue to affect subsequent generations. Because trauma can affect others who are associated with the traumatized individual, it is important that research recognizes secondary trauma as a valid danger to youth. It can be expected that because of the increased reports of parenting problems (Roberts, et al., 2004) and strained parent-child relationships (Choi, et al., 2017) in cases of secondary trauma, survivors will report a high number of ACEs in the household dysfunction category. Working to prevent secondary trauma by educating parents and educational systems about the risks associated with household dysfunction is an important step toward stopping a cycle of trauma.

Academic Outcomes

One outcome of trauma exposure in children and adolescents is decreased academic functioning (Daignault & Hebert, 2009). It has been hypothesized that when dealing with trauma exposure and PSTD, unwanted thoughts, elevated stress, and a high sense of alertness can make it challenging for students to focus on their work (Mathews et al., 2009). A study that

investigated the connections between childhood maltreatment, trauma symptoms, cognitive ability, and academic achievement found that the presentation of trauma symptoms affected cognitive ability, which in turn lowered academic achievement. Memory was among the most negatively affected abilities in traumatized and maltreated children. These findings suggest that trauma and maltreatment have a detrimental effect on cognitive abilities. Moreover, the fact that memory is particularly affected by trauma brings up considerable concerns regarding school performance of traumatized and maltreated children (Ogata, 2017). It can be assumed that some of these children will enroll in college where they will continue to be affected and experience difficulties in academic functioning (Banyard & Cantor, 2004).

Neurobiological Changes

Some academic challenges could be explained by neurobiological changes as a result of early trauma. Research findings indicate that continuous elevations of the central nervous system in childhood due to life stress may play a part in the biological aspects of the increased susceptibility to the onset of depression and anxiety (Heim & Nemeroff, 2001). When examining stress hormones, individuals diagnosed with PTSD as a result of past child abuse have 61 percent higher cortisol levels than those without childhood trauma resulting in PTSD (Bremner et. al., 2003a; Bremner et. al., 2003b; Stein, 1997). Anxiety and depression have been shown to decrease academic functioning. For example, college students with anxiety and depression experience negative academic functioning, such as lower academic achievement, lower GPA, and higher rates of absenteeism than non-depressed or anxious students (Abu Ruz et al., 2018).

These findings suggest that childhood trauma can change how an individual's brain works by increasing stress hormones (Bremner et. al., 2003a; Bremner et. al., 2003b; Heim & Nemeroff, 2001; Stein, 1997). An increase in stress hormones can make individuals more

susceptible to anxiety and depressive disorders (Heim & Nemeroff, 2001), resulting in lower functioning. The challenges and stress associated with transitioning to and succeeding in college can be expected to be more challenging when the brain is hardwired to have higher cortisol as a result of past trauma. Future research should recognize the neurobiological underpinnings of trauma and the effects it can have on academic functioning and adjustment to college life.

College Student Outcomes

Although the proportion of college students who have a history of childhood trauma is largely unknown, previous studies have found between 36 and 75 percent of their sample had experienced at least one childhood trauma event (Aspelmeier et al., 2007; Calmes et. al., 2013; Duncan, 2000). An adult with a history of childhood trauma who is enrolling in college faces a multitude of elevated risks and challenges. Additionally, a dose-response effect applies between multiple childhood trauma events and negative college outcomes. More specifically, research has shown that students with exposure to multiple childhood trauma events were found to be at an elevated risk for negative adjustment as well as low academic achievement in college (Banyard & Cantor, 2004).

Other risks to academic functioning for college students include increased substance abuse. The National Center for Addiction and Substance Abuse (CASA; 2007) has indicated that the college population has between two and three times higher rates of estimated substance dependence than the general population. Individuals with a history of childhood trauma are particularly at risk for substance abuse (CASA, 2007). Research has provided evidence that childhood trauma exposure is a predictor of substance abuse in college (Calmes et. al., 2013). This is concerning because substance abuse can threaten a student's ability to perform well in

college. Negative academic outcomes as a result of substance abuse include lower grades, class absences, cognitive deficits, and memory blackouts (White & Hingson, 2013).

In addition to an elevated risk for negative adjustment, decreased academic functioning, and an increased risk of substance abuse, trauma exposed college students are also more likely to drop out before completing their degree. A study that followed 210 college freshmen through four years of college tracked their dropout rates. Participants completed measures of mental health and childhood trauma, including a selection of questions from the Clinician Administered Trauma Interview to asses for childhood sexual abuse, and the Family Experiences Questionnaire to asses for childhood physical and emotional abuse. Results showed that the likelihood of a childhood trauma survivor staying enrolled in college decreased significantly each semester. At the end of the fourth year, only 35 percent of those participants who had reported childhood trauma were still enrolled compared to 60 percent of those without trauma exposure (Duncan, 2000). Future research should look at facilitating increased college enrollment for youth trauma survivors, as well as examining ways that they can be retained on campus.

There are many challenges that arise and adversities to overcome in college for trauma survivors. Fortunately, there is research that seeks to identify traits and factors that increase success and resilience for this at-risk population. In a sample of first-year students who were survivors of trauma, it was found that strong social support, internal locus of control, and the ability to find meaning in trauma events acted as resilience factors and were related to more positive adjustment (Banyard & Cantor, 2004). In similar research, resilience factors such as high intelligence, positive caregiving, quality education, high self-esteem, and family support were found to predict better college adjustment (Maples et al., 2014). Many resilience factors

have been identified in research; however, more research is needed to identify specific supports to increase the academic resilience of this at-risk population to assist with their academic success.

Resilience

Recovering from a traumatic event requires a certain amount of resilience. Resilience has been defined as “the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development” (Masten, 2014). The question of what makes a person more likely to bounce back, successfully cope, and avoid harmful outcomes in the face of an adverse situation, involves resilience. It has been suggested that resilience is a multidimensional construct (Harvey et al., 2007; Lynch et al., 2007). Resilience is not only the qualities an individual has but also the actions they take in the process of becoming resilient. Facets of resilience include protective and risk factors, adaptive and maladaptive coping skills in response to stress, and how these factors relate to each other to produce positive or negative outcomes (Olsson et al., 2003).

A person can be simultaneously traumatized and resilient. A traumatic childhood event comes with considerable suffering, but it can also come with surviving, which often involves increased resilience and growth (Harvey et al., 2007). However, the question of what is ‘suffering’ and what is ‘surviving’ can be considered somewhat subjective. Researchers have grappled with the issue of how to define a positive adaptation because it requires relative value judgments placed on what is and is not a “good” outcome or choice. In a review of research measuring resilience in participants who have experienced childhood maltreatment, it was found that researchers often define positive adaption as average functioning with no psychological disorders and reaching markers of development valued by society, such as being employed

(Walsh et al., 2010). This is important because the term positive adaption may be misleading to readers who assume that a participant is doing well in all areas of life. A clearer definition of positive adaption or resilience has been operationalized by many investigators as an objective pattern of reaching expectations set by the culture and society in which the person resides (Masten, 2001). Overall, resilience is complex and has many dimensions. Although this may not change, researchers can make an effort to clearly define their concept of resilience so that it is obvious which facets are being measured.

Childhood Trauma and Resilience

Some individuals are more adept at recovering from childhood trauma due to being more resilient. Increased resilience in these individuals may be due to certain protective factors, such as social support, family cohesion, coping skills, and emotion regulation or self-control, which aid in decreasing the negative impact of trauma exposure (Meng et al., 2018). One study examined family influences on victimization of children. The study used a large sample of over 2,000 children who were 2 to 9 years of age. Several protective factors emerged that fostered resilience in the children. Nurturing parents, family stability, a place to live, and adults outside of the family who cared about the child were found to protect children against psychological stress following exposure to trauma. Also, a sense of safety was found to be a protective factor that decreased the risk of negative well-being mentally, emotionally, and physically (Turner et al., 2012). The aforementioned protective factors for young children speak to the importance of a healthy family structure and stability. More specifically, relying on the protective factor of caring adults outside the family such as a teacher to build a positive relationship model could be helpful. According to Sciaraffa and colleagues (2018), efforts can be made by childhood educators to increase the health, well-being, and protective factors in the lives of children who

have experienced adversity. This can be accomplished when educators create predictable and safe environments and develop caring dependable relationships with children.

Resilience varies across each stage of life. As demands on an individual change, so do the protective factors that buffer against trauma. A literature review conducted regarding the effects of childhood trauma on mental and physical health later in life provides essential information regarding outcomes for resilient older individuals (Maschi et al., 2013). The review consisted of literature published with participant samples consisting of adults 50 years and older who experienced childhood trauma. It was found that individual responses to childhood trauma have the ability to be adaptive or maladaptive in ways that affect the individual's biological, cognitive, behavioral, emotional, and social well-being throughout the course of life. The studies reviewed also attempted to discover the differences between the participants who had adaptive responses to their childhood trauma and those that had maladaptive responses. It was found that self-esteem, a sense of safety, positive outlook, social support, and spirituality all had an effect on the adaptive responses of the participants. The results of this study underline the importance of being aware of both the short and long-term effects of childhood trauma. Trauma left untreated can continue to influence an individual's resilience in many aspects of life into older adulthood.

Foster Care and Resilience

Studies focusing on the resilience of emancipated foster youth have found that they are largely a resilience group. A research study used latent profile analysis to assess for patterns of ability and competence among foster youth. More specifically, the researchers looked for meaningful patterns of strengths and weaknesses and found that 47 percent of the sample of 164 emancipated foster youth had a resilient profile. This profile required that the youth were doing relatively well in all areas of competence compared to non- fostered youth. Youth in this group

reported having intimate and reciprocated friendships and romantic relationships, were actively pursuing education or occupational ventures, were involved in their communities, had high self-esteem, and had low depressive symptoms when compared to the population of non-foster youth. Youth in a smaller subset of the sample (16.5 %) fit into a maladaptive profile, which was grouped by adjustment difficulties and low competence in all areas, such as education, occupation, civic engagement, interpersonal relationships, self-esteem, and depressive symptoms. The youth with maladaptive profiles also reported more behavior problems, higher levels of substance use, and lower levels of well-being and social support. Although a small percentage of emancipated foster youth were severely struggling, over 80 percent of the sample demonstrated competence in at least one domain of adjustment. These findings suggest that despite significant adversity and trauma exposure during the difficult transition to adulthood, most of the emancipated foster youth were able to maintain strength and achieve success in varying areas. Future research will need to consider individual differences in adjustment, risk factors, and protective factors, to determine what factors may lead to adaptive outcomes in young adulthood. Research needs to identify common patterns of past experiences that lead to successful adjustment to help individuals achieve maximal life success (Yates & Grey, 2012).

A similar study looked at levels of resilience in older foster youth who were approaching the age of emancipation. In this study, resilience was defined and measured by combining several different areas pertaining to internal and external life outcomes. Completed educational level, pregnancy status, homelessness, mental disorder diagnosis, substance abuse history, and criminal records were examined, as well as number of foster care placements. Out of the 351 foster youth, lower resilience was found to be associated with higher amounts of reported physical abuse and sexual abuse. In addition, an increased number or placement changes within

the foster care system and criminal involvement in the family were also found to be associated with a decrease in resilience (Shpiegel, 2016). These findings suggest that as trauma exposure increases, so does the risk for increased environmental adversity, which is associated with decreased resilience. According to research, most emancipated foster youth possess resilient qualities in at least one area of life functioning, but overall, as a foster youth experiences cumulative exposure to trauma events, the chances of that youth being resilient are reduced.

Foster Care Outcomes

In 2016, the Adoption and Foster Care Analysis Reporting System reported that 437,465 children were in foster care. Of those children, more than half stayed in foster care for more than one year (U.S Department of Health and Human Services, 2017). Foster youth often experience several types of trauma, such as maltreatment, multiple moves, loss of family members, disrupted education, and abuse (Morton, 2018). Most of the specific trauma events listed previously and detailed in foster care research fall under the criteria outlined in the adverse childhood experiences scale (ACE). Therefore, it can be said that life outcomes for children who have been in foster care are similar to outcomes of childhood trauma victims in that foster care exposure increases rates of social problems, substance abuse, and mental health problems (Felliti et. al., 1998; Zlotnick et al., 2012). Specific risks to foster care exposure include high rates of teen pregnancy and an increased number of arrests when compared to same-age peers who have never been in foster care (Zlotnick et al., 2012). Foster children are known to have more intense needs in part due to their trauma histories. Foster children are three times more likely to be taking psychotropic medications than non-foster children and are also more likely to be diagnosed with ADHD, PTSD, and Reactive Attachment Disorder (Lohr & Jones, 2016).

To be placed in foster care, a child must by definition be removed from custody of his or her parents. Removal of a child typically happens for reasons that are immediate safety risks. Safety risks can range from abuse, neglect, parental substance abuse, unsuitable living conditions, parental mental illness, family violence, or the absence of parents (Lohr & Jones, 2016). For these reasons, individuals who have been in foster care will likely indicate having experienced at least one adverse childhood event on the ACE questionnaire (Felliti et. al., 1998). Frequent trauma exposure and early adverse experiences can lead to a number of struggles during the transition to emancipation and adulthood.

Research using the ACE questionnaire with emancipated foster youth attempted to determine what patterns of childhood adversity exposure yielded different life outcomes. Levels and types of trauma exposure as determined by the ACE questionnaire were examined. It was found that emancipated foster youth who had suffered several types of trauma and adversity in childhood often continued to be at an elevated risk for further adversity in adulthood. A specific risk factor found to be particularly harmful was environmental adversity. Environmental adversities are dangerous conditions in an individual's life such as accidents, fires, maltreatment in the community, unhealthy foster care placements, and witnessing violence. Youth who had experienced both adversity and trauma in early life prior to being placed in foster care, as well as environmental adversity in foster care, were at a significantly higher risk of negative outcomes as adults (Rebbe et al., 2017).

Emancipated foster youth also show higher rates of adverse childhood experiences (ACEs) leading to higher risk of negative life outcomes. Additional adversity that is specific to foster care has been discussed as being the possible reason for negative life outcomes. A study in England interviewed 242 former foster children, now in college, about their experiences. A

finding across individuals was that the instability of care placements and frequent moves reinforced a feeling of transience or not belonging. Case management changes were also a reported factor contributing to the feeling of transience. Seventeen percent of the sample of former foster youth experienced at least four social worker changes over the three to four years the study took place. Another finding was that the person in charge of care, either foster parents, residential workers, or case managers, had insufficient training and lacked the coping skills necessary to deal with the problems related to their foster children when they arose (Ward, 2009). Overall, research indicates that emancipated foster youth are a high-risk population. Future research is needed to identify key areas of common adversity that could benefit from community or academic support to increase the likelihood of positive life outcomes.

Separation from Parents

The death of a parent is considered a significant childhood trauma event (Felitti et. al., 1998); however, there is evidence to support that separation from a parent is just as traumatic and can actually lead to a higher risk of developing several major health and psychopathology issues. The American Academy of Pediatrics has issued statements regarding the effects of family separation (AAP, 2018; AAP 2017). The AAP considers family separation, and more specifically forcible separations, to be an adverse childhood experience and a "social determinant of mental health disorders." In one study, participants who had experienced a parent's death before the age of 17 had a significantly higher chance of developing depression than participants from intact families (OR=3.8, P=0.001). Participants who reported separation from parents had an equally elevated risk of developing depression with an even higher effect (p=.008; Agid et. al., 1999; Agid et al., 2000).

A similar study provided evidence that separation from a parent is more devastating than the death of a parent. It was found that children who had been separated from their parents experienced more psychological symptomology and rated their well-being lower than those from intact families, whereas participants who had experienced the death of a parent did not have significantly different ratings on these factors (Agid et al., 2000; Canetti et. al., 2000). In terms of foster care outcomes, these results demonstrated that children being separated from their families are subjected to the same, if not more, harsh adversities and risks than those affected by other childhood trauma experiences. It has been theorized that being separated from a parent is an environmental marker for psychiatric illness (Bryant et al., 2017). Therefore, it is important that mental health professionals consider environmental factors when attempting to understand a child’s specific psychiatric symptoms. Additionally, adults should also work to build healthy connections and dependable relationships with foster youth who are separated from their biological parents (Bryant et al., 2017)

Academic Achievement

Most college freshmen are 18 years old, so it is important to note that when youth in foster care turn 18, they are said to “age out” of the system. Meaning, that the formal role of the government to ensure the child's safety and well-being has ended, along with the foster family’s financial compensation and obligation for caring for the youth (Courtney & the Society for Research in Child Development, 2009). It has been theorized that foster youth reaching the age of emancipation are not adequately prepared to live independently. This is because their foster care world was heavily dominated and structured by adults such as caseworkers, which did not leave much room for the youth to learn how to make independent decisions (Morton, 2018). Simmonds (2018) summarizes this process well by stating that the new young adult is left

thinking “what will happen in the future?” and they are often expected to take care of themselves. Therefore, foster care alumni attending college may not have a concept of family or a stable support system in place to help them transition to adulthood and college life (Simmonds, 2018). American culture places a high emphasis on family relationships, and these do not typically end after childhood, but continue to be a support that individuals can rely on throughout their lives. Foster children who are emancipated at 18 must essentially transition to adulthood alone without the help or moral support of family. This is something to consider when thinking of ways to support foster care alumni attending college and helping them be successful.

Salazar (2013) examined the value of a college education when comparing the general population and foster care alumni. The college graduates with foster care exposure experienced similar amounts of individual income and had similar rates of employment when compared to the general population of college graduates. An area that differed was that of mental health. The foster are alumni reported more days of negative mood and unhappiness than the general population. These results are promising in that foster care alumni were able to graduate from college and acquire jobs and income, but consistent with other research on childhood trauma events, they continued to have increased mental health problems (Felliti et. al., 1998; Maschi et al., 2013; Zlotnick et al., 2012).

Foster youth encounter many academic challenges, but despite these challenges, a majority report wanting to enroll in postsecondary education (Morton, 2018). Some studies have speculated that the failure rate of foster youth in college may be due to being in multiple foster placements during secondary education. This placement instability often means the youth must change schools and risk getting behind, especially for a high school student, since moving to a new school can affect graduation credit (Morton, 2015; Ward, 2009). It has been reported that

only 3 to 11 percent of young adults who have been emancipated from foster care enroll in and successfully earn a bachelor's degree (“Supporting Success”, 2010). Recent research has suggested possible solutions to this problem, emphasizing the need for universities to be aware of the more intensive needs of their students who are coming from foster care. These students want to complete a bachelor's degree, but they will need mental health support from their post-secondary institution to deal with high incidences of PTSD, anxiety, and/or depression symptoms (Morton, 2018). Morton asked foster care alumni who were currently enrolled in a four-year university what challenges they had faced when pursuing a bachelor's degree. The study aimed to find out if foster care alumni were able to move on from their previous trauma exposures in foster care and overcome challenges to complete a bachelor’s degree. Some common themes emerged from the interviews. Mental health was a significant challenge, with about half of the participants reported having a mental health diagnosis, such as anxiety, depression, and/or PTSD. Many of the participants reported that mental health was the number one obstacle to the achievement of a bachelor's degree. Emotion regulation was another common theme with participants. Every participant shared struggles they had with maintaining a stable emotional state while dealing with the many demands of higher education, such as homework, finances, housing and rent, and working a part-time job, all without the help or support of a traditional family. Students also commonly reported poor self-regulation, histories of self-harm, emotional distress, and skipping class due to uncontrolled mental health issues. These findings suggest that colleges should be aware of students who come from foster care and provide access to mental health supports on campus. (Morton, 2018).

Some universities offer campus support programs specifically for former foster children. These programs often include financial support, academic advising, student support groups, help

with finding and paying for housing, and mentoring. Dworsky and Perez (2009) conducted a study examining the implementation of ten campus support programs across California and Washington that were designed to provide support to students who had aged out of foster care. Interviews were conducted with program directors and a survey was sent to 98 students enrolled across all programs. Interviews with program directors revealed that 8 out of 10 programs provided a scholarship to enrolled students and that the scholarships were designed to address needs not covered by financial aid. Many program directors mentioned that a significant amount of effort is devoted to recruiting high school students who may be eligible for their program. Programs also stated that they continually tried to increase awareness of campus supports through school counselors, conference presentations, communicating with professional who work with foster youth, and mass mailing to foster families. The student survey asked a series of questions about supports and services received followed by a rating of their importance. Almost all the students reported that help choosing a major and courses was very important to them. In addition, almost all students reported that the financial aid they received was important or very important. Similarly, housing assistance was received by two thirds of the participants and was rated as being important or very important by almost everyone. Of all the students surveyed, over half were assigned a mentor; however, most rated this as being less important overall than receiving housing or financial aid assistance (Dworsky & Perez, 2009). These findings demonstrate that organized support programs for former foster children attending college exist and supports and services that were rated highly by students can be modeled and implemented at any university.

Childhood Trauma, Resilience, and Foster Care

Childhood trauma can cause or increase the risk of many negative physical and mental health issues (APA, 2013; Felliti et. al., 1998), decrease social functioning (Maschi et al., 2013), impact life competencies (Yates & Grey, 2012), and decrease academic achievement (Daignault & Hebert, 2009). Many of these negative outcomes are also seen in foster care alumni. Resilience needs to be built and potentially taught to help off-set the adversities faced by these at-risk populations and set them up for future life success. The effects and outcomes of trauma change, along with the role of resilience, throughout the life span.

Adolescents

A study examining trauma experiences and factors of resilience was conducted in a sample of adolescents who were placed in residential care, which is a type of foster care. Residential care is known to be a placement for youth who have more intense needs or behavioral concerns. It was found that 98 percent of the adolescents reported physical neglect and 38 percent reported sexual abuse. This prevalence is significantly higher than what would be expected in the general population. The trauma-related outcomes reported were clinical levels of anger, anxiety, depression, and PTSD. When resilience traits were reviewed, the traumatic experiences reported were found to have a negative effect on the youth's resilience. The adolescents with at least four or five types of traumatic abuse or neglect had the lowest individual, relational, and community resilience feature score, compared to those who only reported one type of trauma. These findings suggest that foster children living in residential care are highly affected by multiple types of trauma, reporting up to five different forms of trauma and maltreatment (Collin-Vezina et al., 2011). Future research should identify supports that can inform interventions to help students who are severely traumatized.

Adulthood Trauma survivors also deal with a plethora of negative physical and mental health risks as they enter adulthood. Many choose to enroll in college, where these mental and physical health risks will continue to persist and cause negative college outcomes, such as lower GPAs, poor self-image, lower academic functioning, and higher rates of dropping out than students without a traumatic history. As previously discussed, foster care alumni typically report more childhood trauma events than students who report any childhood trauma events but have not been in foster care (Collin-Vezina et al., 2011). Adequate knowledge and resilience-building interventions are needed to support college students with traumatic childhoods and foster care experiences.

Batsche and colleagues (2014) conducted a study that gathered information from current college students and alumni who were previously emancipated from foster care. The concepts outlined in the KnowHow2Go campaign, developed by the Lumina Foundation (2007), were used for interviewing these students. The KnowHow2Go campaign was designed based on methods that have been successful at targeting the struggles of first-generation students with attending college. The four main steps of the KnowHow2Go campaign are, (1) Find someone to help you get information to learn about college; (2) Push yourself by taking hard classes and college entrance tests; (3) Find the right fit by selecting an institution that matches your academic record career goals and personal circumstances; and (4) Put your hand on some cash by applying for financial aid and scholarships. Twenty-seven participants between the ages of 18 and 25 were individually interviewed. Interviews were between 45 and 90 minutes and included a series of questions corresponding to all four KnowHow2Go steps. Examples of questions included things like ‘tell me your experience with this step,’ and ‘tell me how you overcame struggles associated with step.’ Common facilitators of successful adjustment as well as

frustrations in participant responses for each step were examined. Overall, finding someone to help an individual learn about college was highly regarded as a factor that contributed to attending college. Participants most commonly reported teachers, high school counsellors, and independent living specialists as people they went to for help to obtain information about college. Common frustration factors included lack of knowledge about college prep courses and the complicated financial aid system. Themes of resilient characteristics for participants also emerged throughout the interviews. Common themes included resourcefulness, goal orientation, positive attitudes, optimism, and the ability to learn from mistakes. These results suggest that colleges need to continue to build upon the resources available that support transition to college life. An idea proposed by Batsche and colleges (2014) to accomplish this is to assign one admissions staff member to be the primary liaison for emancipated foster youth and potentially aid these students with navigating financial aid, promoting scholarship opportunities, and introducing and referring students to available services on campus. Future research should work to obtain information about what resources would be helpful on campus from current or past students with foster care experience.

Rationale for Current Study

The current study sought to explore the relationships between childhood trauma history, college enrollment and adjustment, and resilient qualities that contribute to academic success through a mixed-methods approach. Past and recent research has found that childhood trauma is quite common. About 60% of adults in the United States report experiencing at least one adverse childhood experience (Merrick et al., 2019). A high prevalence of childhood trauma in the U.S. population has many negative implications for society, including higher health risks and negative life outcomes. One way our society measures success is through education and specifically in

gaining a college education. Research has found that up to 75 percent of college students report experiencing adverse childhood experiences (Calmes et al., 2013). These students encounter risks in the academic world such as negative college adjustment and lower academic achievement, and are two times as likely to drop out before completing a degree as those who have no trauma history (Banyard & Cantor, 2004). Many factors have been identified that can increase resiliency in trauma survivors as well as college students, but more work is needed to address specific academic resilience factors that help individuals succeed in their courses. The current study examined college students with trauma histories in an attempt to identify what resilient qualities these students have or are lacking academically that could be undermining their success at school. With more information on academic resilience in relation to students with trauma history, the unique strengths and challenges of this population will be better understood. When there is more understanding, future intervention programs and supports can be set in place to facilitate higher achievement and retention rates for childhood trauma survivors.

A second aim of this study was to gather information about the students at University of Montana who have been in foster care. A placement in foster care typically happens for reasons that are immediate safety risks to the child such as abuse, neglect, or family violence (Lohr, & Jones, 2016). The ACE questionnaire identifies abuse, neglect, and household dysfunction as trauma types. Consequently, individuals who have been in foster care will likely report at least one adverse childhood event on the ACE questionnaire and suffer the same risk of negative life outcomes. Academically, foster students who choose to enroll in college are essentially on their own after being emancipated from foster care at the age of 18. It has been reported that less than 12 percent of emancipated foster youth enroll in post-secondary education and successfully complete a bachelor’s degree (“Supporting Success,” 2011). The transition to college, as well as

adulthood, is daunting for anyone, but students emancipated from foster care are a particularly high-risk population (Ward, 2009). The current study aimed to determine what types of childhood adversities college students who have formerly been in foster care have experienced, as well as what academic resilience factors they possess. Given these aims, the following research questions will be examined to address the quantitative aspects of this study.

Research Questions

Research Question 1: Do college students who score 1 or more on the Adverse Childhood Experience (ACE) questionnaire have different resilience scores than college students who have a score of 0?

H1: College students who report a score of 1 or above on the Adverse Childhood Experience (ACE) questionnaire will have a different resilience mean score on the Academic Resilience Scale than college students who report a score of 0 on the ACE questionnaire.

Research Question 2: Is there a significant relationship between the students' Adverse Childhood Experience (ACE) questionnaire scores and resilience scores?

H2: Mean scores on the Adverse Childhood Experience (ACE) questionnaire will be significantly correlated with mean scores on the Academic Resilience Scale for students who report a score of 1 or more on the ACE questionnaire.

Research Question 3: Do foster care students have higher scores on the Adverse Childhood Experience (ACE) questionnaire than students without a foster care history?

H3: Students who report having been in foster care will have a significantly higher mean score on the Adverse Childhood Experiences (ACE) questionnaire than those who do not report foster care experience.

Qualitative Component

A second aspect of the current study utilized a qualitative approach. The current study examined the student population formerly in foster care by asking questions about their experiences in the past, as well as how those experiences have contributed to success or struggles in college. We asked questions pertaining to aspects of transitioning to college life. We wanted to know what was challenging and helpful in facilitating their transition and successful enrollment. Additionally, we examined which supports and resources on campus have been used and deemed as helpful, as well as what areas of need still exist on campus. Finally, we asked about relationships formed in foster care and how those have supported or inhibited the participants' success. These questions aimed to identify specific themes across participant responses to inform what aspects of the college transition were useful and what is needed for future students transitioning from college to foster care.

Chapter III: Methods

Participants

Undergraduate students at the University of Montana were recruited to participate in this study through the undergraduate research sign-up system (SONA). Participants were given the incentive of extra credit points toward their classes if they chose to participate. One hundred and sixty five participants started the survey, but due to attrition, only one hundred and sixty one participants completed the entirety of the demographics questions, Adverse Childhood Experiences questionnaire (ACE), Academic Resilience Scale (ARS-30), and part one of the Foster Care Experience survey (FCE). Additionally, five participants completed part two of the FCE survey after indicating that they had been in foster care in part one of this survey. Participants identified as male (26.1 %), female (73.3 %), and nonbinary (.6 %). Participants identified their age as follows: 18-20 (60.6%), 21-23 (18.2%), 24-26 (7.3%), and 27+ (13.9%). Participants also identified their race/ethnicity: Asian (4.2%), Black (1.8%), Latinx (1.2%), Native American (3.1%), White (87.9%), and Other (1.8%). Participants who marked 'Other' specified identifying as "Black and White," "Caucasian/Chicano," and "Pacific Islander." Finally, participants indicated their year in school as follows: Freshman (50.9%), sophomore (21.5%), junior (13.5%), and senior (14.1%).

Measures

Childhood Trauma

The Adverse Childhood Experience (ACE) questionnaire (Felliti et al., 1998) was adopted as a screening measure for histories of adverse childhood events. The ACE questionnaire is a 10-item retrospective self-report measure of childhood events. All questions refer to the events during the respondent's first 18 years of life. The ACE questionnaire includes

statements such as “Did a parent or other adult in the household often push, grab, slap, or throw something at you?” answered in a yes or no format, where yes is scored as 1 and no is scored as 0. A total score is computed and referred to as the individual’s ACE score. The questions are further broken down into three broad categories: abuse, neglect, and household dysfunction, each of which can derive its own category-specific score based on the number of items corresponding to the category answered with a score of 1. The ACE questionnaire has good to excellent reliability, as shown by test-retest and higher levels of internal consistency with Cronbach’s $\alpha = .88$ (Dube et al., 2003). This questionnaire was chosen because of its dimensionality. The categories are relevant to the questions explored in this study, since abuse, neglect, and household dysfunction are central to the main research questions. The mean score for the ACE questionnaire for this study was M = 2.37 (SD = 2.26). The internal consistency for the ACE questionnaire in this study was $\alpha = 0.749$. This is considered an acceptable level of reliability. See Appendix A for the complete version of the ACE questionnaire.

Resilience

The Academic Resilience Scale (ARS-30; Cassidy, 2016) was adopted as a measure of academic resilience. ARS-30 is a thirty-question measure of academic resilience. It first asks that respondents read a short paragraph while imagining that they are in the described situation. The paragraph describes a situation where the respondent has received a failing grade on a recent assignment, along with harsh critical feedback from the instructor. This is then followed by the question “if you were in this situation how do you think you would react?” The thirty questions that follow include statements such as “I would be very disappointed,” and “I would try to think of new solutions.” The questions are rated on a Likert scale from 1 (strongly agree) to 5 (strongly disagree). ARS-30 scores are broken down into three different sub-factor scores: perseverance,

reflecting, and adaptive help-seeking. The ARS-30 focuses on resilience present in the academic process (i.e., perseverance, reflecting, help-seeking) rather than in academic outcomes. The items on the ARS-30 assess students' adaptive and behavioral responses to adversity in the academic world. Examples include adapting to feedback, asking for help when it is needed, and increasing effort when things are challenging. The ARS-30 was shown to have good internal reliability as indicated by an overall Cronbach's alpha of 0.90, as well as Cronbach's alpha's in the acceptable range for the three factors (α= 0.83, α= 0.78, α= 0.80; Cassidy, 2016). The ARS-30 was positively correlated with a measure of academic self-efficacy, which demonstrates medium concurrent validity of the scale. (r = 0.49; Cassidy, 2016). The ARS-30 was selected because of its ability to measure academic resilience as a process and not as a stable trait. By assessing for perseverance, reflection, and help-seeking behaviors in students, we are able to get a fuller picture of what they are currently capable of achieving, but also what they could be taught. Additionally, the dimensionality in final scores allows for potential correlations with ACE questionnaire scores. The mean score for the ARS-30 in this study was M = 108.78 (SD = 18.45) and the internal consistency was $\alpha = 0.93$. This is considered an excellent level of association and suggests that the sample of college students answered the questions on this scale in a consistent manner. See Appendix B for a complete version of the ARS.

Foster Care Experience

The Foster Care Experience survey questions (FCE) created for this study consisted of two initial questions. The first question asked if the participant knew anyone who had ever been placed in a foster home. The second question asked if the participant had ever been placed in a foster home. These initial questions were designed to assess the prevalence and/or exposure to foster care experienced in the sample. Only those who answered "yes" to the second question,

indicating having personal experiences being in foster care, were considered to have foster care experience with regard to the analyses. One hundred and sixty-six participants completed part one of the FCE survey. Five participants responded to question one with an answer of ‘yes,’ indicating that they had been in foster care. These five participants were then directed to complete part two of the FCE survey. Part two was comprised of seven additional questions that were analyzed qualitatively. These questions were created to gather information about respondents’ specific challenges, as well as strengths gleaned from their experiences in foster care and how they have contributed to their success or hardship in transitioning to college. See Appendix C for a complete version of the Foster Care Experience survey.

Procedure and Data Analyses

Quantitative

After completing an electronic informed consent to participate, participants completed the ACE questionnaire, the ARS-30, the Foster Care Experience survey, and the demographic questions. The demographic questions asked for the participant’s age-range, gender, race, and year in school (e.g., freshman, sophomore, junior, senior). Data were collected through the online survey system Qualtrics. Each participant took the same surveys, unless a participant answered ‘yes’ to Question 2 of the Foster Care Experience survey, indicating that they have been in foster care. If Question 2 was answered ‘yes,’ the participant was redirected to a second survey where they were prompted to provide written answers to questions. Participants were not asked to assign their name or any identifying information to their survey. The online survey system, Qualtrics, grouped survey data by participant. Data was downloaded from Qualtrics and analyzed using IBM SPSS Statistics 26.

Qualitative

To address the qualitative aspect of this study, data collected from the Foster Care Experience survey was coded using Nvivo12 qualitative analytic software (NVivo Pro 12; 2018). Nvivo12 is a qualitative data organization program that identifies themes and finds patterns within the data. The principal investigator coded all the surveys. A research assistant coded one quarter of the responses. This has been regarded by previous research to be the standard coding practice for qualitative data (Kahn, 1999).

Content analysis methodology was used to aid in the identification of relevant themes and patterns that arose in the survey data (Patton, 2015). Content analysis allowed us to highlight important themes while leaving behind the non-essential information (Patton, 2015). The inductive content data analysis methodology supported the coding of responses based on patterns of themes and topics that were presented in the responses. The first codes used were structural to follow and be grouped by the FCE survey questions. The following codes were data-driven, meaning that the raw data was read several times by the principal investigator and research assistant and then relevant themes were coded. The final procedure employed was triangulation analysis. Triangulation reduces bias in the findings by cross checking the data collected in one method against other methods (Patton, 2015). For the purpose of this study, the qualitative data was used to enhance themes that were found in the quantitative data. Triangulation supports understanding of different perspectives of the same phenomenon. The data sources analyzed by the principal investigator and the research assistant coder were compared in a process called analyst triangulation.

The primary goal of the qualitative portion of the current study was to gain information about the struggles and successes of college students who have formerly been in foster care, as well as what factors have contributed to or hindered their success. Because we were interested in

knowing what struggles have been most prominent and what supports have been most valuable, a qualitative inductive analysis was used when analyzing survey responses. Qualitative inductive analysis is able to examine the data and develop and confirm theories as well as identify themes.

Researcher Biases

The principal investigator of this study is a third-year school psychology doctoral student at the University of Montana. Her parents have been foster parents for eight years and first became foster parents when she was a senior in high school. Throughout those years, they have fostered children on short- and long-term bases, keeping some children for up to a year and half and others as short as a weekend. The principal investigator has been fairly involved with the foster children along the way. She learned how the system worked and witnessed the struggles her parents and the foster children staying with them had to go through on a daily basis. Additionally, she became close with the children they fostered and experienced the pain of seeing the system fail them in many cases. As a result of these experiences and prior knowledge of the foster care system, the principal investigator decided to pursue the topics of childhood trauma, resilience, and foster care experiences for her research. Bias is apparent in all research and for this reason a second coder was included in the data analysis process. Additionally, the principal investigator engaged in the process of bracketing throughout data analysis, to become aware of her own personal bias thoughts or feelings and record them in a journaling format.

Chapter IV: Results

Research Question 1

To address Research Question 1*, Do college students who score 1 or more on the ACE scale have different resilience scores than college students who score 0 on the ACE scale*, a one-way ANVOA was conducted. The analysis was significant, F (1, 154) = 9.39, p = .003 (N^2 =.057). Together, the group of college students who reported one or more adverse childhood events scored lower on the ARS-30 (M = 106.20, SD = 18.49) than the group of college students who reported zero adverse childhood events (M = 116.3, SD = 16.41). According to Cohen (1969), the partial eta squared value of .057 is just below a medium effect size (.0588). A medium effect size in this case indicates moderate practical significance in assuming that college students who reported adverse childhood events were likely to score lower on the ARS-30 than college students who did not report adverse childhood events.

Research Question 2

To address Research Question 2, *Is there a significant relationship between the students' ACE scores and resilience scores?* a Pearson's correlation test was conducted. It was hypothesized that ACE scores of one or more would be correlated with mean scores on the ARS-30. Results of the Pearson correlation indicated that the correlation strength between ACE scores of 1 or more and ARS-30 scores was non-significant and of weak strength r (230) = -.124, p = .188. However, when the analysis was modified to include ACE scores of 0, there was a significant negative association between ACE scores and ARS-30 scores, r (313) = -.239, p = .003. The data were found to be normally distributed with a linear relationship. The direction of the relationship was negative, meaning that as the total ACE score decreased (M = 2.38), the total ARS-30 score increased (M = 108.79). This correlation, while weak in strength, has the

potential to have real world application, especially considering the relatively large overall sample size of this study. The results showed that students with at least one adverse experience are significantly less academically resilient, which could lead to a number of negative effects such as lower motivation to attend school, lower grades, and possibly dropping out of school. However, more research is needed to determine the exact effects.

Research Question 3

To address Research Question 3, *Do foster care students have higher ACE scores than students without a foster care history?*, an ANOVA was conducted to compare the effect of total ACE score for students who have been in foster care and those who have not. The analysis was significant, $F(1, 157) = 6.32$, $p = .013$ ($N^2 = .039$). Students who reported foster care experience scored higher on the ACE questionnaire ($M = 4.80$, $SD = 2.58$) than students who had no foster care experience ($M = 2.28$, $SD = 2.18$). According to Cohen (1969), the partial eta squared value of .039 is a small effect size. This indicates that foster care experience can result in higher ACE scores; however, the specific relationship between these two factors needs to be further investigated. .

Qualitative Results

One of the goals of this research study was to gain information about the areas of struggle and success of college students who were formerly in foster care. Another goal was to identify factors that contributed to or hindered success in college for this population. Possible answers to these questions were discovered in the study based on five participants with a previous history of foster care. This study explored relevant themes pertaining to the questions using inductive content analysis. The following section discussed the themes discovered based on the research goals. The principal investigator coded all the data and a research assistant coded thirty percent

of the data, which exceeds the accepted standard coding practice for qualitative data of 25 percent (Kahn, 1999). The interrater reliability was 93%.

Demographics

Out of all the participants, more than half reported knowing someone in foster care (58%). Only five participants reported being in foster care themselves and were prompted to complete the qualitative portion of this research study (The Foster Care Experience Survey, Part 2). Participants identified as male (20%), female (80%) . Participants identified their age as follows: 18-20 (40%), 21-23 (20%), and 27+ (40%). Participants identified their race/ethnicity as: White (60%), Native American (20%), and Black (20%). Participants indicated their year in school as freshman (60%) and junior (40%). Participants were also asked to indicate in which foster placements they have lived, how long they spent in foster care, and how many placement changes they experienced. Three participants indicated living in foster family homes, one indicated living in a foster home of a relative, and one participant indicated that they had lived in both foster family homes and a foster home of a relative. Two participants indicated that they were in foster care for less than one year and three participants indicated that they were in foster care for one to two years. Three participants reported that they had only one placement throughout their time in foster care and two reported two to five placement changes.

Challenges Encountered in Life and College

Participants were asked *"In relation to your foster care experiences, what three things have been the most challenging in college?"* The most reported challenges were found to be related to social difficulty. Three out of the five (60%) participants reported challenges indicative of struggles with social difficulty. Participants reported "fitting in," "getting to know people," and "feeling alienated" as challenges they have faced in life and college. It is possible that

former foster children attending college have more social difficulty because their situation is unique in the college population. It might be hard for these individuals to relate to the typical college student who does not have foster care experience and who benefits from family support. Social difficulty was the only pattern found across several participant responses. This could mean that challenges encountered in college are personal and individualized based on the specific context of a person's life and experiences. Other things reported included challenges related to the process of deciding to attend and getting accepted into college, financial stress, difficulty communicating, low self-confidence, and locating helpful resources. The amount of family support, social support, and financial resources each individual has would affect their challenges in the college world.

Contributions to Success in Life and College

Participants were asked *"In relation to your foster care experiences, what three things have contributed to your success in life and in college?"* The most commonly reported contributors to success were found to be related to overcoming challenges, resilience, and family support, which were each endorsed by two out of five participants (40%). One participant said, "My sister frequently contributes to my success by providing the only parenting I ever received." Another participant said, "Faith that I can overcome obstacles." Other contributing factors mentioned included financial state, flexibility, forgiveness, friendships, gratitude, school resources, and teacher support. This question prompted a wide variety of responses with limited overlap. Similar to the challenges faced by this population, success factors may also be personal and individualized. However, responses like school resources, teacher support, and friendships all suggest that a support system is important for success. The response from two participants that overcoming challenges lead to success was particularly interesting. It seems as though the

difficult obstacles that these individuals faced and were able to overcome in the past continues to support their success today. It could be that having the experience of being challenged and succeeding to overcome that challenge leads to a belief and trust that an individual can overcome future challenges.

Supports Utilized and Wished for

Participants were asked "*What supports on campus have you used to help with your transition to college life?* What do you wish was available?" The most commonly reported support used on campus was Disability Services for Students (DSS), with three out of five participants (60%) having indicated using this service. Another common resource reported was TRIO Student Support Services. TRIO was reported as a support used by two out of five participants (40%). TRIO Student Support Services is a program that is funded by the U.S Department of Education that provides assistance to students who meet eligibility criteria based on household income, parent's education level, or student disability. Other supports mentioned included academic advisor and mental health professional. Only one participant indicated that they would benefit from additional support services, stating "I wish there were more scholarships for people doing this alone with no family help and I wish there were support groups for students in similar situations to come together and support/understand each other".

The Effects of Relationships Built in Foster Care

Participants were asked to *"Describe how your relationships in foster care have contributed to or inhibited your success in college."* The most common sentiment found within the responses was that these relationships have not contributed to or inhibited their success in college. Two out of five participants (40%) reported that the relationships they built in foster care were not meaningful. One participant wrote "They haven't done anything. My memories of it are

zip, zilch, nada. What little I do remember is just fear, but I'm not sure I was fearing them or being returned home." Although the most common answer was that relationships built in foster care had no effect on success in college, three out of five participants (60%) also reported different personal experiences. One of the three participants mentioned having gained a feeling of being capable of success, another indicated that they became a better communicator, and the third said that they were able to grow a thicker skin.

Advice for Other Foster Children Wanting to Attend College

Participants were asked *"What advice would you give other foster children who want to attend college?"* The most common advice identified perseverance. Three out of five participants (60%) suggested that foster children who want to attend college should keep trying and continue to work hard. Participant gave advice such as "You'll have hard days in college but it's important to allow yourself to feel those emotions and continue to see the end of each day," "If you get up each day and put yourself out there the best you can despite fear, you will find one good thing, soon you will have dozens of good things, then hundreds," and "Try harder than you think you should because the pros will definitely outweigh the cons." Another common theme identified in the advice offered by participants was reassurance. Two out of five participants (40%) offered words of encouragement such as "You can do and be whatever you want," "I believe in you," and "you are capable of anything you put your mind to." Additionally, two out of five participants (40%) mentioned life experience. One participant reaffirmed that the worst days are behind a child who ages out of foster care and the other suggested that foster children should obtain some practical life experience before attempting college. Other things mentioned included treating the friends you make in college as your new family and utilizing all available resources.

Chapter V: Discussion

The current study examined the interactions between childhood trauma and adverse experiences, academic resilience, and foster care experiences, using a mixed method approach to assess these topics. Quantitative data was collected from all participants, and an inductive content analysis approach was utilized when assessing the qualitative data of students who were formerly in foster care. The findings for each research question and the qualitative results will be discussed below, along with possible limitations of the current study and future directions.

Research Question 1

The first research question for this study was "*Do college students who score 1 or more on the ACE scale have different resilience scores than college students who score 0 on the ACE scale?*" It was hypothesized that college students who reported a score of 1 or above on the ACE questionnaire would have a different resilience mean score on the ARS-30 than college students who reported a score of 0 on the ACE questionnaire. The results showed that the difference was statistically significant and that those with ACE scores of 1 or more have lower Academic resilience scores as measured by the ARS-30.

The hypothesis for this research question was bidirectional because it was not clear based on previous research how adverse childhood experiences would affect resilience. The current study found that reporting zero adverse childhood experiences lead to higher academic resilience scores. Intuitively this makes sense, because college students who report no adverse childhood experiences are likely to have minimal or no lasting effects of trauma related to childhood. Even a single adverse childhood event has been shown to be linked to long lasting, treatment resistant, negative physiological and mental health effects (D'Andrea et al., 2011).

Because college students with elevated ACE scores show, on average, less academic resiliency, providing high school students who have elevated ACE scores with supports that help them get into college could decrease the negative effects of the adversity they have faced and increase their resilience. Research has shown that childhood educators can significantly boost the health, wellbeing, and resilience of children who have experienced adversity (Sciaraffa et al., 2018). This can be accomplished in many ways, including creating structured and safe environments and fostering compassionate and dependable relationships with the children. Additionally, many colleges across the United States are moving away from requiring standardized test scores such as the ACT or SAT for admission (Barnum, 2020). This benefits many students who may have experienced more pressing concerns than academics while in high school. Specifically, students who faced adversity or trauma growing up and had a lower socioeconomic status may have a better chance at getting into college without having to take a standardized test (Barnum, 2020). However, students will still need their teachers to support them through the process of applying to college and will likely need to rely on the relationships built with these trusted adults to guide them.

Knowing that college students who report adverse childhood events were found to have lower academic resilience than those without adverse childhood experiences, it seems to be of utmost importance that this population is given access to tools that can help facilitate resilience. This is particularly important since past research has found that untreated childhood trauma can negatively affect an individual's resilience through older adulthood (Maschi et al., 2013). Maschi and colleagues (2013) also found that self-esteem, sense of safety, positive outlook, and social support were common traits found more often in resilient childhood trauma survivors. These factors could be helpful in future interventions to support the growth of resilience in college

students with a history of adverse childhood experiences. For example, creating support groups that connect students with similar backgrounds could facilitate social support, as well as a safe place to talk about challenges many individuals in the group could be facing. The connections with other individuals in similar situations and a place to 'fit in' could also foster a higher self-esteem and positive outlook.

Research Question 2

Research Question 2 asked *"Is there a significant relationship between the students' ACE scores and resilience scores?"* It was hypothesized that mean scores on the ACE questionnaire would be significantly correlated with mean scores on the ARS-30 for students who report a score of 1 or more on the ACE questionnaire. The results showed that there was a small significant correlation between ACE and ARS-30 scores for the entire sample. However, when looking only at participants with an ACE score of 1 or more and ARS-30 scores, the correlation was no longer significant. In other words, the lasting effects of adverse childhood experiences were shown to influence academic resilience scores in the analysis of Research Question 1 and Research Question 2, only when including ACE scores of 0. These results suggest that adverse effects on academic resilience may occur even when an individual has only one adverse child experience, although more research is needed to better understand these adverse effects.

Past research has found that a person can be simultaneously traumatized and resilient (Harvey et al., 2007). Although traumatic or adverse childhood events may cause considerable pain and suffering, they can also be associated with the feeling of "surviving," which often facilitates resilience and growth (Harvey et al., 2007). If an individual persevered to get into college and was successful, that could increase their hope and positive outlook of their future in a way that helps minimize the effects of trauma reported in the ACE questionnaire. As seen in the

FCE part 2, participants with foster care experience and ACE scores of 1 or more reported overcoming challenges as being a factor in their continued success today. This may be why only a small significant correlation between ACE scores and ARS-30 scores was found.

Research Question 3

Research Question 3 investigated the question "*Do foster care students have higher ACE scores than students without a foster care history?"* It was hypothesized that students who report foster care experiences would have a significantly higher mean score on the ACE questionnaire than those who did not report foster care experience. The results showed that students with foster care experience scored significantly higher on the ACE questionnaire than students without foster care experience. Although the effect size was small, small differences can still have meaningful implications for student outcomes, with more research being needed to further understand these outcomes for at-risk students. .

Something to consider with regards to this finding is that the overall mean ACE score of students with foster care experience was compared to the overall mean score of all students in the study. Seventy five percent of participants in this study reported an ACE score of 1 or more. Many adverse childhood events and traumatic experiences go unreported, are unnoticed, or are not severe enough to warrant children being placed in a foster home. For that reason, it is possible that some participants in this study had more significant traumatic experiences and the same ACE score as the five participants who reported being in foster care. The overall average ACE score for participants without foster care experience was 2.37, whereas the average score for those who reported foster care experience was 4.8. With a small sample of foster care students, the ability to generalize this finding outside of this study is limited. It would be

especially important to have more equal group sizes when conducting future research comparing those with and without foster care experiences.

The significant finding for this question was expected and aligns with past research. Foster children experience the same negative physical and mental health risks as childhood trauma victims, along with additional negative outcomes (Felliti et al., 1998; Zoltnik et al., 2012). Above and beyond risks faced by childhood trauma victims, foster children also face elevated risks of teen pregnancy, criminal arrest, taking psychotropic medications, and being diagnosed with a mental health disorder (Lohr et al., 2016). Additionally, research has shown that separation from family can have a greater effect on an individual than the death of parent (Agid et al., 2000). These unique challenges and risks faced by former foster children demonstrate that children in foster care are subjected to the same, if not more, harsh adversities and risks than those affected by other childhood trauma experiences.

To consider the small effect size, it is important to think about the sample that was used in the current study. Interestingly, past research conducted with a sample of emancipated foster youth found that there were more youth who fit a resilient profile than those who fit a maladaptive profile (Yates et al., 2012). The resilient profile considered things like reciprocated friendships, romantic relationships, community involvement, self-esteem, depressive symptoms, education level, and occupation. When considering Yates and colleague's (2012) findings compared to those of the current study, it makes sense that the former foster children included in this study would most likely be resilient due to having been accepted into college despite their negative adversity in childhood. Research Question 3 compared ACE scores, but resilience could play a role in the way trauma is interpreted by an individual. It is possible that a resilient group of former foster children may be better able to cope with the traumas and adversities they have

faced in the past, which could lead to under-reporting on the ACE scale. On the other hand, it is also possible that the resilient group of former foster children included in this study had less childhood trauma than those who did not get accepted into or apply for college. It would be interesting to see whether the relationship between ACE scores of former foster children and non-foster children would be stronger in a non-college population.

Qualitative and Quantitative Findings Considered Together

When looking at the qualitative and quantitative results of the current study, there is both overlap and differences. The results from the analysis of Research Question 1 found that students with an ACE score of 1 or more had lower academic resilience scores. This finding demonstrated that adverse childhood experiences have lasting and far reaching effects that continue into college. The former foster children who participated in the current study were asked to list three things that contributed to their success in life and college. What they reported fit into the themes of self-esteem, having a positive outlook, and social support. These have also been reported in previous research examining common traits found in resilient childhood trauma survivors (Machi et al., 2013). The sample of participants with foster care experience reported that these traits were helpful to them and allowed them to get to where they are today (i.e., enrolled in college). Because this sample already has these traits, this may demonstrate that they are more resilient than other former foster children who are not enrolled in college. However, knowing that former foster students enrolled in college may be more resilient than those not in college is not sufficient to help either population increase their success or resilience. The results of Research Question 2 indicate that college students with any adverse childhood experiences, which was found in the entire foster care population, had lower academic resilience scores in relation to the amount of adverse childhood experiences reported. This means that students with adverse childhood

experiences in college have a lower level of academic resilience than those without adverse childhood experience. For this reason, it would still be important to support and foster the growth of resilient traits in college students with adverse experiences, even if they already possess some resilient traits and have shown they are a resilient by enrolling in and attending college. It is also interesting to consider the answers provided in the FCE part 2 about advice to other former foster children wanting to go to college. Themes focusing on building self-esteem and having a positive outlook were mentioned by several participants, which as previously mentioned, are two traits that are commonly found in resilient childhood trauma survivors (Machi et al., 2013).

Another trait of resilient childhood trauma victims is social support (Machi et al., 2013). Social support was mentioned as a success factor in the FCE part 2 survey by 40 percent of the sample, but it was also mentioned as a challenge by 60 percent of the sample. Additionally, a wish for social support groups was mentioned by one participant. The amount of times social support came up in the FCE part 2 in different contexts seems to indicate that it is a complex factor and an important asset upon which to focus. Those who have social support report that it is a significant success factor in their lives and journey through college, whereas those who either don't have or have minimal amounts of social support, indicate that it is a significant challenge in life and college. Creating a support groups on campus for students with similar backgrounds of abuse, trauma, and foster care experience, could be very beneficial to building resilience as well as boosting social support for this at-risk population.

Chapter VI: Limitations and Future Directions

Despite this being a novel study that contributed to and expanded upon past research, it also has its limitations. A considerable limitation was the participant sample. The participants recruited for this study were enrolled in the University of Montana and were taking a class in the psychology department. For this reason, these results can only be generalized to other university populations with similar demographics. It would be helpful if future research recruited participants from classes in many academic departments at the university to get a fuller picture of the college population.

A second limitation involved bias, which inherently occurs with inductive content analysis. Creating themes based on what is read in the participant responses is a matter of personal perception and knowledge. To reduce bias, a research assistant was recruited to code 30 percent of the data. Additionally, the principal investigator utilized a bracketing journal to become aware of and record personal biases before and during data analysis. These processes helped ensure that the principal investigator was being as objective as possible.

A third limitation are the questions used in the Foster Care Experience Survey Part 2. These questions somewhat constricted the amount of information that the participants shared. For example, question four asks, "In relation to your foster care experiences, what three things have contributed to your success in life and in college?" This type of questioning lead most participants to merely list three things and not provide explanations. It was hard to extrapolate a deeper meaning of the factors without having any contextual information about why and how the things listed by the participant contributed to their success. Future research should include more open-ended questions that prompt participants to provide additional information. For example, future research may ask participants to identify three things that have contributed to their success

in life and college and explain how or why they contributed to their success. It would be beneficial to gather more in-depth information and obtain additional context to the answers provided. A possible solution to this would be to conduct in person interviews with participants rather than collect written responses.

Additionally, the small sample of former foster children is a significant limitation to this study. There were only 5 participants who reported being in foster care during childhood. This small sample limits the conclusions that can be made based on the findings of this study. Recruiting from many departments instead of the psychology department alone could have resulted in a larger sample of students who had been in foster care. A sample of five is most likely not representative of the entire population of former foster children attending the University of Montana. Future research should expand the recruitment process to be as wide reaching as possible to get as close to accurate representation of the total number of former foster children enrolled in college.

Implications for Higher Education Settings

The findings of the current study underline the importance of having emotional and academic supports on college campuses for former foster care children and those with highly traumatic backgrounds. Students with high exposure to childhood trauma events have been found to be at an elevated risk for negative college adjustment and have low academic achievement (Banyard et al., 2004). Former foster children face the same elevated risks in addition to a very low graduation rate, which tends to be between 3 and 11 percent nationwide ("Supporting Success," 2010). The findings from the current study and similar findings from previous research can inform changes to college campuses to help support these students.

Some college campuses have programs dedicated to providing a variety of support to former foster youth (Dworsky et al., 2010). These types of programs often grant access to financial, academic, social/emotional, and logistical (housing) support. It seems as though these programs are the best-case scenario because all supports are organized into one cohesive program and there are recruitment efforts to inform eligible individuals about their options after high school. One study evaluated the usefulness of some of these campus support programs for former foster children in Washington and California by conducting interviews with enrolled students enrolled and asking them what was helpful (Dworsky et al., 2010). Below are ideas for higher education institutions seeking to better support their former foster children and survivors of childhood trauma based on the results of the current study, as well as results from Dworsky and colleague's (2010) study that asked students to reflect upon the usefulness of the supports provided.

Creating support groups for students coming from similar backgrounds was mentioned by one participant in the FCE part 2 survey, with this idea also being mentioned in previous research. The creation of a group that would bring together students with something in common would be helpful therapeutically while also fostering a sense of social support. In the Dworsky and colleagues (2010) study, students involved in programs that connected them to others in similar situations on campus reported that it helped them feel as if they were not alone. In fact, 86 percent of the participants reported that being involved in the campus support program they were enrolled in provided them with a sense of family. Being able to share where a person comes from and relate to others who have similar experiences was highly regarded by participants as being important in the Dworsky and colleague's (2010) study, with similar sentiments being mentioned by participants in the current study. Creation of support groups for former foster

children, as well as groups for students with an extensive trauma history, would be a valuable addition to any college campus.

Many students in Dworsky and colleague's (2010) study reported that getting help choosing a major and registering for courses was very important. This has important implications for former foster children. Because these individuals may have lacked positive adult role models in childhood, they may not have been able to discuss things like career options and life goals with knowledgeable adults. In the current study, some students reported professor and faculty support as being a factor in their success. Students at the University of Montana are assigned an academic advisor to assist them in choosing classes and majors, but it would be worth considering assigning one advisor who has an interest in helping former foster students register for classes and who could possibly mentor that student . Many of the programs described in Dworsky and colleague's (2010) study placed students with a mentor, either an older student in the same program or a staff member. Establishing a connection with an older student or a staff member would not only help with the process of choosing a major but would also help students start to build a support system at college.

Another factor to consider is that of housing. When freshman students attend college, they often stay in dormitories. Although this is great for most students because it eliminates the process of trying to find housing for the first year, it may not be great for those who have nowhere to go when dormitories close for winter and summer break. Colleges should be aware when closing the dormitories that not everyone has a home to return to during the holidays. Many of the programs described in Dworsky and colleague's (2010) study provided year-round housing to the former foster children enrolled. Most students rated the housing assistance they received as being important or very important to their success. Students in the current study did

not mention housing as a challenge, but they did mention finances. Housing is a significant economic expense for many college students. Colleges could make an effort to reach out to and support students in dormitories during breaks, as well as help finding affordable housing for upperclassmen.

Lastly, to provide services to specific students, they need to first be identified. It would be worth considering adding a question to freshman student surveys or an enrollment demographic question that asks about foster care history, extensive trauma history, or unstable family support so that students who might benefit from campus services can be identified and contacted. It can be challenging to know where to get help and what is available on a college campus. When the college is aware of their at-risk populations, they will be able to reach out to students directly to describe the supports and services that are available to them.

References

Abu Ruz, M. E., Al-Akash, H. Y., & Jarrah, S. (2018). Persistent (anxiety and depression) affected academic achievement and absenteeism in nursing students. *The open nursing journal*, *12*, 171–179. https://doi.org/10.2174/1874434601812010171

Agid, Kohn, & Lerer. (2000). Environmental stress and psychiatric illness. *Biomedicine & Pharmacotherapy, 54*, 135-141. https://doi.org/10.1016/S0753-3322(00)89046-0

Agid, O., Shapira, B., Zislin, J., Ritsner, M., Hanin, B., Murad, H., . . . Lerer, B. (1999). Environment and vulnerability to major psychiatric illness: A case control study of early parental loss in major depression, bipolar disorder and schizophrenia. *Molecular Psychiatry, 4*, 163-172. https://doi.org/10.1038/sj.mp.4000473

American Academy of Pediatrics (AAP). AAP Statement Opposing Separation of Mothers and Children at the Border, March 4, 2017: https://www.aap.org/en-us/ about-the-aap/aap-press-room/Pages/immigrantmotherschild renseparation.aspx

American Academy of Pediatrics (AAP). AAP Statement Opposing Separation of Children and Their Parents at the Border, May 8, 2018: https://www.aap.org/en-us/about-the-aap/aap-press-room/ Pages/StatementOpposingSeparationofChildrenandParents.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Aspelmeier, Elliott, & Smith. (2007). Childhood sexual abuse, attachment, and trauma symptoms in college females: The moderating role of attachment. *Child Abuse & Neglect, 31*, 549-566. https://doi.org/10.1016/j.chiabu.2006.12.002

Banyard, V., & Cantor, E. (2004). Adjustment to college among trauma survivors: An exploratory study of resilience. *Journal of College Student Development, 45*, 207-221. https://doi.org/10.1353/csd.2004.0017.

Barnum, M. (2020, May 18). *The coronavirus is pushing some colleges away from the SAT and ACT. Here's who might benefit*. Chalkbeat. https://www.chalkbeat.org/2020/5/18/21262897/coronavirus-sat-act-university-california-research-equity

Batsche, C., Hart, S., Ort, R., Armstrong, M., Strozier, A., & Hummer, V. (2014). Post-secondary transitions of youth emancipated from foster care. *Child & Family Social Work, 19*, 174-184. http://doi.org/10.1111/j.1365-2206.2012.00891.

Bremner, Vythilingam, Vermetten, Adil, Khan, Nazeer, . . . Charney. (2003). Cortisol response to a cognitive stress challenge in posttraumatic stress disorder (PTSD) related to childhood abuse. *Psychoneuroendocrinology, 28*, 733-750. https://doi.org/10.1016/S0306-4530(02)00067-7

Bremner, J., Vythilingam, M., Vermetten, E., Southwick, S., Mcglashan, T., Nazeer, A., . . . Charney, D. (2003). MRI and PET study of deficits in hippocampal structure and function in women with childhood sexual abuse and posttraumatic stress disorder. *American Journal of Psychiatry, 160*, 924-932. https://doi.org/10.1176/appi.ajp.160.5.924

Bryant, R. A., Creamer, M., O'Donnell, M., Forbes, D., Felmingham, K. L., Silove, D., . . . Nickerson, A. (2017). Separation from parents during childhood trauma predicts adult attachment security and post-traumatic stress disorder. *Psychological Medicine, 47*, 2028-2035. http://doi.org/10.1017/S0033291717000472

Calmes, S., Laux, J., Scott, H., Reynolds, J., Roseman, C., & Piazza, N. (2013). Childhood psychological trauma and first-year college students' substance dependence. *Journal of Addictions & Offender Counseling, 34*, 70-80. https://doi.org/10.1002/j.2161-1874.2013.00016

Canetti, Bachar, Bonne, Agid, Lerer, De-Nour, & Shalev. (2000). The impact of parental death versus separation from parents on the mental health of Israeli adolescents. *Comprehensive Psychiatry, 41*, 360-368. https://doi.org/10.1053/comp.2000.9002

Cassidy S. (2016). The Academic resilience scale (ARS-30): A new multidimensional construct measure. *Frontiers in psychology*, *7*, 1787. https://doi.org/10.3389/fpsyg.2016.01787

CDC. DC. Behavioral Risk Factor Surveillance System survey data. Atlanta, GA: US Department of Health and Human Services, CDC; 2017. Retrieved from: https://www.cdc.gov/brfss/annual_data/annual_2017.html

Centers for Disease Control and Prevention. (2019). *Adverse Childhood Experiences.* Retrieved from https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html

Choi, Sikkema, Vythilingum, Geerts, Faure, Watt, . . . Stein. (2017). Maternal childhood trauma, postpartum depression, and infant outcomes: Avoidant affective processing as a potential mechanism. *Journal of Affective Disorders, 211*, 107-115. https://doi.org/10.1016/j.jad.2017.01.004

Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. New York: Academic Press.

Collin-Vézina, D., Coleman, K., Milne, L., Sell, J., & Daigneault, I. (2011). Trauma experiences, maltreatment-related impairments, and resilience among child welfare youth in

residential care. *International Journal of Mental Health and Addiction, 9*, 577-589. https://doi.org/10.1007/s11469-011-9323-8

Courtney, M., & Society for Research in Child Development. (2009). The difficult transition to adulthood for foster youth in the US: Implications for the state as corporate parent. Social Policy Report. Volume XXIII, Number I. Society for Research in Child Development, Society for Research in Child Development, 2009.

Daignault, I., & Hebert, M. (2009). Profiles of school adaptation: Social, behavioral and academic functioning in sexually abused girls. *Child Abuse & Neglect, 33*, 102-115. https://doi.org/10.1016/j.chiabu.2008.06.001

D'Andrea, W., Sharma, R., Zelechoski, A. D., & Spinazzola, J. (2011). Physical health problems after single trauma exposure: When stress takes root in the body. *Journal of the American Psychiatric Nurses Association*, *17*, 378–392. https://doi.org/10.1177/1078390311425187

Dube, S., Felitti, V., Dong, M., Chapman, D., Giles, W., & Anda, R. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics, 111*, 564-72. Retrieved from Gale Academic Onefile, https://link.gale.com/apps/doc/A98921551/AONE?u=mtlib_1_1195&sid=AONE&xid=2dc09599.

Duncan, R. (2000). Childhood maltreatment and college drop-out rates: Implications for child abuse researchers. *Journal of Interpersonal Violence, 15*, 987-995. https://doi.org/10.1177/088626000015009005

Dworsky, A., & Pérez, A. (2010). Helping former foster youth graduate from college through campus support programs. *Children and Youth Services Review, 32*(2), 255-263.

https://doi.org/10.1016/j.childyouth.2009.09.004

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine, 14*, 245-258. https://doi.org/10.1016/S0749-3797(98)00017-8

Felsen, I. (1998). Transgenerational transmission of effects of the holocaust: The North American research perspective. In Y. Danieli (Ed.), *The Plenum series on stress and coping. International handbook of multigenerational legacies of trauma* (43-68). New York, NY: Plenum Press. http://dx.doi.org/10.1007/978-1-4757-5567-1_3

Harvey, Mondesir, & Aldrich (2007). Fostering resilience in traumatized communities: A community empowerment model of intervention. *Journal of Aggression, Maltreatment & Trauma, 14,* 265-285. https://doi.org/10.1300/J146v14n01_14

Heim, & Nemeroff. (2001). The role of childhood trauma in the neurobiology of mood and anxiety disorders: Preclinical and clinical studies. *Biological Psychiatry, 49*, 1023-1039. https://doi.org/10.1016/S0006-3223(01)01157-X

Kahn, P. H., Jr. (1999). The human relationship with nature: Development and culture. Cambridge, MA: The MIT Press.

Lohr, W., & Jones, V. (2016). Mental health issues in foster care. *Pediatric Annals, 45*, 342-348.

Lumina Foundation (2007) Nationwide effort urges teens to ‘KnowHow2GO’. Lumina Foundation Focus , Fall, 9. Retrieved from http://focus.luminafoundation.org/pdf/fall2007/

Lynch, S. M., Keasler, A. K., Reaves, R. C., Channer, E. G., & Bukowski, L. T. (2007). The story of my strength: An exploration of resilience in the narratives of survivors of trauma. *Journal of Aggression, Maltreatment & Trauma, 14*, 75-97. https://doi.org/10.1300/J146v14n01_05

Maples, L., Park, S., Nolen, J., & Rosen, L. (2014). Resilience to childhood abuse and neglect in college students. *Journal Of Aggression Maltreatment & Trauma, 23*, 1001-1019. https://doi.org/10.1080/10926771.2014.964435

Maschi, T., Baer, J., Morrissey, M., & Moreno, C. (2013). The aftermath of childhood trauma on late life mental and physical health: A review of the literature. *Traumatology, 19*, 49-64. http://dx.doi.org/10.1177/1534765612437377

Masten, A. (2001). Ordinary magic. Resilience processes in development. *The American Psychologist, 56*, 227-238. http://doi.org/10.1037/0003-066X.56.3.227

Masten, A. (2014). Global perspectives on resilience in children and youth. *Child Development, 85*, 6-20. https://doi.org/10.1111/cdev.12205

Mathews, Dempsey, & Overstreet. (2009). Effects of exposure to community violence on school functioning: The mediating role of posttraumatic stress symptoms. *Behaviour Research and Therapy, 47,* 586-591. https://doi.org/10.1016/j.brat.2009.04.001

Meng, X., Fleury, M., Xiang, Y., Li, M., & D'Arcy, C. (2018). Resilience and protective factors among people with a history of child maltreatment: A systematic review. *Social Psychiatry and Psychiatric Epidemiology, 53*, 453-475. https://doi.org/10.1007/s00127-018-1485-2

Merrick, T., Ford, D.C., Ports, K.A., Guinn, A.S., Chen, J., Klevens, J., Metzler, M, Jones, C. M., Simon, T. R., Daniel, V. M., Ottley, P., Mercy, J. A. (2019) Vital signs: Estimated

proportion of adult health problems attributable to adverse childhood experiences and implications for prevention - 25 States, 2015–2017. *MMWR Morb Mortal Wkly Rep 2019, 68*, 999-1005. http://doi.org/10.15585/mmwr.mm6844e1external icon.

Morton, B. (2018). The grip of trauma: How trauma disrupts the academic aspirations of foster youth. *Child Abuse & Neglect, 75*, 73-81. https://doi.org/10.1016/j.chiabu.2017.04.021

National Center on Addiction and Substance Abuse at Columbia University. (2007). *New CASA report finds: Half of college students binge drink, abuse prescription and illegal drugs.* Retrieved from https://www.centeronaddiction.org/newsroom/press-releases/2007-wasting-the-best-and-the-brightest

New research: The long-term physical-psychiatric effects of childhood trauma. (2019, May 19). Retrieved from https://www.psychiatry.org/newsroom/news-releases/new-research-the-long-term-physical-psychiatric-effects-of-childhood-trauma.

Ogata, K. (2017). Maltreatment related trauma symptoms affect academic achievement through cognitive functioning: A preliminary examination in Japan. *Journal of Intelligence, 5* http://dx.doi.org.weblib.lib.umt.edu:8080/10.3390/jintelligence5040032

Olsson, C., Bond, L., Burns, J., Vella-Brodrick, D., & Sawyer, S. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence, 26*, 1-11. https://doi.org/10.1016/S0140-1971(02)00118-5

Patton, M. (2015*). Qualitative research & evaluation methods: Integrating theory and practice (Fourth ed.).* Thousand Oaks, CL: Sage Publications.

Rebbe, R., Nurius, P., Ahrens, K., & Courtney, M. (2017). Adverse childhood experiences among youth aging out of foster care: A latent class analysis. *Children and Youth Services Review, 74*, 108-116. https://doi.org/10.1016/j.childyouth.2017.02.004

Roberts, O'connor, Dunn, & Golding. (2004). The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. *Child Abuse & Neglect, 28*, 525-545. https://doi.org/10.1016/j.chiabu.2003.07.006

Sciaraffa, M. A., Zeanah, P. D., & Zeanah, C. H. (2018). Understanding and promoting resilience in the context of adverse childhood experiences. *Early Childhood Education Journal, 46*, 343-353. https://doi.org/10.1007/s10643-017-0869-3

Shpiegel, S. (2016). Resilience among older adolescents in foster care: The impact of risk and protective factors. *International Journal of Mental Health and Addiction, 14*, 6-22. https://doi.org/10.1007/s11469-015-9573-y

Simmonds, J. (2018). The ecology of foster care - Resilience and adaptation into adulthood. *Children Australia, 43*, 95-104. http://dx.doi.org/10.1017/cha.2018.16

Stein, Koverola, Hanna, Torchia, & McClarty. (1997). Hippocampal volume in women victimized by childhood sexual abuse. *Psychological Medicine, 27*, 951-959. https://doi.org/10.1017/S0033291797005242

Substance Abuse and Mental Health Services Administration. (2017, December 19). Retrieved October 21, 2019, from https://www.samhsa.gov/.

Supporting Success. (2010, December 1). Retrieved from https://www.casey.org/supporting-success/.

Tufford, L., & Newman, P. (2010). Bracketing in qualitative research. *Qualitative Social Work, 11*, 80-96. https://doi.org/2443/10.1177/1473325010368316

Turner, H., Finkelhor, D., Ormrod, R., Hamby, S., Leeb, R., Mercy, J., & Holt, M. (2012). Family context, victimization, and child trauma symptoms: Variations in safe, stable, and nurturing relationships during early and middle childhood. *American Journal of Orthopsychiatry, 82*, 209-219. http://doi.org/10.1111/j.1939-0025.2012.01147

U.S. Department of Health & Human Services, Administration for Children and Families, Children's Bureau. (2019). Child Maltreatment 2017. Available from https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment.

Ward, H. (2009). Patterns of instability: Moves within the care system, their reasons, contexts and consequences. *Center for Child and Family Research*, *31*, 1113-1118. https://doi.org/10.1016/j.childyouth.2009.07.009

Walsh, W., Dawson, J., & Mattingly, M. (2010). How are we measuring resilience following childhood maltreatment? Is the research adequate and consistent? What is the impact on research, practice, and policy? *Trauma, Violence, & Abuse, 11*, 27-41. https://doi.org/10.1177/1524838009358892

White, A., & Hingson, R. (2013). The burden of alcohol use: Excessive alcohol consumption and related consequences among college students. *Alcohol Research: Current Reviews, 35*, 201-218. Retrieved from https://search.proquest.com/docview/1531953450?accountid=14593

Yates, T., & Grey, I. (2012). Adapting to aging out: Profiles of risk and resilience among emancipated foster youth. *Development and Psychopathology, 24*, 475-492. https://doi.org/10.1017/S0954579412000107

Zlotnick, Tam, & Soman (2012). Life course outcomes on mental and physical health: The impact of foster care on adulthood. *American Journal of Public Health, 102*, 534-40. Retrieved from https://search-proquest-com.weblib.lib.umt.edu:2443/docview/1001240902?accountid=14593

Appendix A

Adverse Childhood Experience (ACE) Questionnaire

Finding your ACE Score ra hbr 10 24 06

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** …
   Swear at you, insult you, put you down, or humiliate you?
   or
   Act in a way that made you afraid that you might be physically hurt?
   Yes No If yes enter 1 ________

2. Did a parent or other adult in the household **often** …
   Push, grab, slap, or throw something at you?
   or
   Ever hit you so hard that you had marks or were injured?
   Yes No If yes enter 1 ________

3. Did an adult or person at least 5 years older than you **ever**…
   Touch or fondle you or have you touch their body in a sexual way?
   or
   Try to or actually have oral, anal, or vaginal sex with you?
   Yes No If yes enter 1 ________

4. Did you **often** feel that …
   No one in your family loved you or thought you were important or special?
   or
   Your family didn't look out for each other, feel close to each other, or support each other?
   Yes No If yes enter 1 ________

5. Did you **often** feel that …

You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?

or

Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

Yes No If yes enter 1 ________

6. Were your parents **ever** separated or divorced?

Yes No If yes enter 1 ________

7. Was your mother or stepmother:

Often pushed, grabbed, slapped, or had something thrown at her?

or

Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?

or

Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

Yes No If yes enter 1 ________

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

Yes No If yes enter 1 ________

9. Was a household member depressed or mentally ill or did a household member attempt suicide?

Yes No If yes enter 1 ________

10. Did a household member go to prison?

Yes No If yes enter 1 ________

Appendix B

Academic Resilience Scale (ARS-30)

Please read the paragraph below and do your best to imagine that **you** are in the situation being described:

> You have received your mark for a recent assignment and it is a 'fail'. The marks for two other recent assignments were also poorer than you would want as you are aiming to get as good a degree as you can because you have clear career goals in mind and don't want to disappoint your family. The feedback from the tutor for the assignment is quite critical, including reference to 'lack of understanding' and 'poor writing and expression', but it also includes ways that the work could be improved. Similar comments were made by the tutors who marked your other two assignments.

If **you** were in the situation described above how do you think **you** would react?

Read each of the statements below and choose your response between **1**(*strongly disagree*) and **5** (*strongly agree*) that best reflects how much you think each statement describes how **you personally** would react.

Please make sure that you give a response to **ALL** the statements and try to be as sincere and precise as possible in your answers.

	Strongly Disagree **1**				Strongly Agree **5**
1. I would not accept the tutors' feedback					
2. I would use the feedback to improve my work					

3. I would just give up					
4. I would use the situation to motivate myself					
5. I would change my career plans					
6. I would probably get annoyed					
7. I would begin to think my chances of success at university were poor					
8. I would see the situation as a challenge					
9. I would do my best to stop thinking negative thoughts					
10. I would see the situation as temporary					
11. I would work harder					
12. I would probably get depressed					
13. I would try to think of new solutions					
14. I would be very disappointed					
15. I would blame the tutor					
16. I would keep trying					
17. I would not change my long-term goals and ambitions					
18. I would use my past success to help motivate myself					
19. I would begin to think my chances of getting the job I want were poor					
20. I would start to monitor and evaluate my achievements and effort					
21. I would seek help from my tutors					
22. I would give myself encouragement					
23. I would stop myself from panicking					
24. I would try different ways to study					

25. I would set my own goals for achievement					
26. I would seek encouragement from my family and friends					
27. I would try to think more about my strengths and weaknesses to help me work better					
28. I would feel like everything was ruined and was going wrong					
29. I would start to self-impose rewards and punishments depending on my performance					
30. I would look forward to showing that I can improve my grades					

Appendix C

Foster Care Experience Survey - Part 1

As per Public Welfare (2018) the definition of foster care is: “Foster care means 24-hour substitute care for children placed away from their parents or guardians and for whom the state agency has placement and care responsibility. This includes, but is not limited to, placements in foster family homes, foster homes of relatives, group homes, emergency shelters, residential facilities, childcare institutions, and preadaptive homes.”

1. Do you know anyone in foster care?
2. Have you ever been in foster care?
    a. (If question 2 is answered ‘Yes’, participant will be redirected to part 2 of the survey).

Foster Care Experience Survey - Part 2

1. Please indicate in which foster placement you have lived (check all the apply)
    a. Foster family homes
    b. Foster homes of relatives
    c. Group homes
    d. Emergency shelters
    e. Residential facilities
    f. Psychiatric hospital
    g. Other (please specify)
2. Please indicate how long you spent in all of your foster care placements combined.?
    a. Less than 1 year
    b. 1 - 2years

c. 3 - 5 years

d. 6 - 9 years

e. 10 or more years

3. Please indicate how many foster care placement changes you have experienced?

a. 1 placement

b. 2 – 5 placement changes

c. 6 – 10 placement changes

d. More than 10 placement changes

4. In relation to your foster care experiences, what three things have contributed to your success in life and in college?
5. In relation to your foster care experiences, what three things have been the most challenging in college?
6. What advice would you give other foster children who want to attend college?
7. What supports on campus have you used to help with your transition to college life? What do you wish was available?
8. Describe how your relationships in foster care have contributed to or inhibited your success in college.