Abstract

In the late 1990s, a series of early life adversities (Adverse Childhood Experiences or ACEs) became a focus for the health community, as the effects of these traumas were diverse, covering both mental and physical health issues, and longstanding, reflecting neurological changes resulting from prolonged exposure to toxic stress. For survivors of childhood trauma, the college transition allows many to begin the healing process. However, most of the work studying growth from past ACEs has been done at large co-educational institutions, and which can silence survivors' healing processes or be insensitive to the unique experiences a Gender Inclusive Women's College provides. This mixed-methods study presents results from an investigation into posttraumatic outcomes (college adjustment and posttraumatic growth) for survivors of Adverse Childhood Experiences within a Gender Inclusive Women's College environment, as well as student-perceived influences of such an environment on their growth narratives. In a sample of 103 first year students at Mount Holyoke College collected during the spring of 2019, it was found that 82.5% of students reported at least one major childhood trauma before entering college, and most reported at least three major childhood adversities. Major findings indicate that Adverse Childhood Experiences are negatively related to both first year GPA and college adjustment; supportive friend networks seem important in mediating this relationship. Findings from this study are used to explore ways in which colleges can work toward addressing the effects of childhood trauma in their student bodies.

Keywords: trauma, Adverse Childhood Experiences, ACEs, first-year, undergraduate, higher education, college transition, posttraumatic growth

Childhood Trauma, Posttraumatic Growth, and Narrative Transformation in a Gender Inclusive Women's College

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Introduction

Between August 1995 and March 1996, Vincent Felitti et al. (1998) conducted an epidemiological study linking 10 extreme childhood adversities with subsequent adult health issues. These adversities included physical, emotional, and sexual abuse, physical and emotional neglect, and five major household dysfunctions (witnessing intimate partner violence, incarceration of a parent, drug abuse by a parent, mental illness of a parent, and divorce). They found that the more types of Adverse Childhood Experiences (ACEs) an individual encountered before age 18, the greater their risk of developing major health issues, engaging in risky behaviors, and subsequent early death (Felitti et al., 1998; Anda et al., 1999, 2006; Anda, Brown, Felitti, Dube, & Giles, 2008; Dube et al., 2003). It has been reported that for ACE survivors, the college transition is a critical period that allows many to begin processing and healing from familial trauma (Banyard & Cantor, 2004). While there have been many studies examining childhood trauma and growth within the context of undergraduate education, most of this work has been done at co-educational institutions. These are unable to account for the unique demographic differences that exist within a Gender Inclusive Women's College, which may provide different opportunities for healing processes. The present study seeks to fill this gap by examining the relationship between ACEs and subsequent growth within the context of a gender inclusive women's college.

Historically, trauma has been an umbrella term for any major, life-threatening (or similar) experience, with childhood trauma referencing experiencing these instances of overwhelming or life-threatening danger before age 18. In this paper, *trauma* is used broadly to describe any major life event that removes an individual's agency or causes lasting psychological damage.

Adverse Childhood Experiences (ACEs), on the other hand, reference a specific set of extremely traumatic events either perpetrated by one's support system *or* which remove agency from a child for prolonged periods. Due to their severity and timing, ACEs are believed to cause more permanent neurological damage than general trauma, which can lead to an increase in negative health outcomes in adulthood. Therefore, this paper uses *ACE* to describe a specific set of events that have previously been linked by research to poor outcomes in adulthood.

Adverse Childhood Experiences

In the two decades since the original ACE report, there have been numerous studies repeating and augmenting the findings relating extreme childhood adversity to subsequent health concerns (e.g., Forster, Grigsby, Rogers, & Benjamin, 2018; Khrapatina & Berman, 2017; McGavock & Spratt, 2014). A meta-analysis of 37 articles from international sources by Hughes et al. (2017) found that ACEs are correlated with significantly increased risks for health concerns, risky behaviors (including substance abuse as well as early or unprotected sexual intercourse), and psychiatric concerns among 252,467 participants. A total of 57% of participants reported experiencing at least one ACE before age 18, and 13% reported at least four ACEs (Hughes et al., 2017). This is not to say that all adversity in childhood is negative. To the contrary, adversity within a supportive network is necessary for human growth (Tedeschi & Calhoun, 1996); however, adversity experienced without a support system can have lasting effects. For children, who have not yet developed a full understanding of the world, experiencing unsupported adversity puts them at a much higher risk of future adversity and chronic health problems (Gold, 2001). This is due do the demoralization, demotion of self, and feelings of powerlessness that arise during unsupported adversity; these emotions can eventually

lead to extreme and appeasement behaviors, hypersensitivity to others, and unprovoked feelings of being unloved, unwanted, or endangered (Peterson, 2014; Glaser, 2002).

By the time young adults enter college, between 73-86% report experiencing at least one major life trauma (Storr, Schaeffer, Petras, Ialongo, & Breslau, 2009; Fraizer et al., 2009; Shuwiekh, Kira, & Ashby, 2018; Calmes et al., 2013; Arnekrans et al., 2018), which includes ACEs but can also refer to experiencing the death of a loved one, or witnessing extra-family violence. For ACEs, this number ranges between 50-56% (Read, Griffin, Wardell, & Ouimette, 2014; Mohr & Rosén, 2017; McGavock & Spratt, 2014; Walsh, Blaustein, Knight, Spinazzola, & van der Kolk, 2007). Additionally, at the time of measurement, many participants reported continuing negative health outcomes, indicating that these traumas were largely unresolved in adulthood. Read, Griffin, Wardell, & Ouimette (2014) found that 21% of participants met full PTSD criteria, while another 19% met partial PTSD criteria. For people with marginalized identities, these rates only increase. Current research on sexual and gender minorities (SGM) indicates that gender nonconformity increases the likelihood of physical and sexual assaults leading to PTSD symptomology by up to 2.5 times (Roberts, Rosario, Corliss, Koenen, & Austin, 2011). Additionally, meta-analysis results found that SGM individuals were about 18% more likely than their cisgender/heterosexual counterparts to experience any form of abuse, and over 40% more likely than their cisgender counterparts to experience either physical or emotional neglect (Schneeberger, Dietl, Muenzenmaier, Huber, & Lang, 2014). Those of marginalized racial identity are also at a higher risk of experiencing an ACE, with Black/African American communities reporting 3.07 odds ratio increase (OR), Hispanic/Latinx communities reporting 5.93 OR, Asian/Pacific Islander communities reporting 3.93 OR, and Other communities reporting 4.24 OR compared to their white counterparts (Cronholm et al., 2015).

Studies of ACEs in college students have found they are correlated with increased risky behaviors, decreased academic performance and retention, and increased vulnerability for other negative health outcomes. Among college students, experiences of trauma before age 18 are associated with increased risk of discontinuing undergraduate programs (Duncan, 2000; Granda, 2017), increased frequency and severity of alcoholism (Read et al., 2012; Read, Griffin, Wardell, & Ouimette, 2014; Goldstein, Flett, & Wekerle, 2010), and increased substance abuse (Read et al., 2012; Arnekrans et al., 2018). Previous studies have found that cisgendered college-aged women frequently abuse alcohol to ameliorate their negative feelings, including depression (Goldstein, Flett, & Wekerle, 2010), and these rates are higher among sexual minority women (Hughes, Wilsnack, & Kantor, 2016). Furthermore, use of substances can become more dangerous after surviving severe childhood trauma; Alemany et al. (2014) found that use of cannabis can provoke psychosis in survivors. Additionally, female students rely most on the use passive coping mechanisms like avoidance or adaptation without problem-solving (31% of women surveyed), which correlates negatively with academic success (Kepalaite, 2013). These outcomes are observed among students across racially diverse backgrounds (Forster, Grigsby, Rogers, & Benjamin, 2018). Beyond this, other studies have linked childhood adversity, particularly sexual assault, to subsequent sexual victimization (Lev-Wiesel, Amir, & Besser, 2005; Walsh, Blaustein, Knight, Spinazzola, & van der Kolk, 2007), and detrimental internal cognition schemas about shame and defectiveness, which lead to significant mental health concerns and diminished college performance (Wright, Crawford, & Del Castillo, 2009).

Neurobiology of Traumatic Stress

The detriments of Adverse Childhood Experiences run deeper than merely increased odds of psychological and physical illnesses, or associations with risky behaviors. Acute stress, like

arriving late to a meeting, staring down from a high place, or even encountering a bear in the woods is reversible. However, Adverse Childhood Experiences represent instances of unhealthy or chronic stress – that which overwhelms the individual's ability to cope and process information about the events that occurred – stress that can change the brain's neurological structures (Painter & Scannapieco, 2013). Research over the past several decades has found that, when these forms of traumatic stress are experienced before the brain finishes developing around age 25, they can cause lasting damage to key structures in the right hemisphere, the limbic system, the stress response system, and other key parts of the body (for summaries, see Heide & Solomon, 2006; Tyrka, Burgers, Philip, Price, & Carpenter, 2013; Heany et al., 2017). These lasting changes are important to understand, as they illuminate the urgency with which the issue of Adverse Childhood Experiences require attention–every parent with an unresolved history of trauma is at risk of transmitting this trauma both socially and biologically to their children through a process referenced as the intergenerational transmission of trauma.

Not in your right brain. In the right hemisphere, both the Anterior Cingulate Cortex (ACC) and Prefrontal Cortex (PfC) are severely affected by childhood trauma. Studies have found that the experience of childhood trauma results in structural changes in the ACC that are connected to heightened vigilance and increased risk of depression, as well as addiction behaviors and, most critically, a difficulty empathizing which may lead to compromised moral judgements (Heide & Solomon, 2006; Hein & Monk, 2017). Interestingly, these findings scale in proportion to the duration and severity of childhood trauma (Heany et al., 2017; Solomon & Heide, 2005; Zhai et al., 2019). Of secondary note, research has also found that exposure to childhood trauma causes significant reductions in size and cortical thickness of the prefrontal cortex (PfC), or the region responsible for logical thought and reasoning (Heany et al., 2017).

Taken together, current research suggests that experience of childhood trauma may significantly alter an individual's right brain structure in a way that, while adaptive for the stressor or situation, hinders their interactions with the world even after the stressor or trauma is removed by inhibiting impulsive behavior and empathetic connection while increasing an individual's focus on social structure and negative social cues.

In limbic limbo. In the Limbic system, two neurological structures are most affected by childhood trauma: the hippocampus, responsible for long-term memory processing and storage and the amygdala, predominantly responsible for threat-detection. Studies have found that the hippocampus becomes hyporesponsive to negative social cues after prolonged childhood trauma, meaning that long-term social learning in stressful situations is impaired (Heany et al., 2017; Paquola et al., 2016; Heide & Solomon, 2006; McCrory, De Brito, & Viding, 2010). At the same time, researchers have found that the amygdala becomes hyperresponsive to negative social cues (Heany et al., 2017) while its total volume is reduced (Paquola et al., 2016; McCrory et al., 2010; Mahajan, 2018), which may relate to the dysregulated fear response that survivors of childhood trauma experience.

A third element, and perhaps the most well-studied psychophysiological phenomenon associated with surviving childhood trauma is the subsequent dysregulation of an individual's the Hypothalamic-Pituitary-Adrenal (HPA) axis, is responsible for controlling the body's stress response system, and is closely connected to the Limbic system. As mentioned previously, rodent studies have found that chronic stressors like juvenile trauma inhibit the body's ability to self-regulate in stressful situations (Gunnar, Hostinar, Sanchez, Tottenham, & Sullivan, 2015). Upon being alerted of a threat, adrenaline secreted into the blood stream triggers the sympathetic nervous system response, prompting the individual to enter the fight-flight-freeze pathways; at

the same time, cortisol begins circulating back up toward the brain, and in nonmaltreated individuals will end the stress response cycle (Gunnar et al., 2015). When stressors are brief and controlled, activation of this stress response mechanism helps maintain healthy functioning; however, if the event is intense, prolonged, or otherwise traumatic, it can lead to chronic activation and hyporesponsitivity of the HPA axis (Heany et al., 2017; Gunnar et al., 2015). This chronic activation and the decreased serotonin efficiency it can cause often leads to a host of maladaptive effects in the way that the brain functions, including the development of illnesses including autoimmune disorders, depression, anxiety, obsessive-compulsive disorder, and others (van Winkle, van Nierop, Myin-Germeys, & van Os, 2013; Solomon & Heide, 2006). For these reasons, it is hypothesized that chronic activation of the HPA axis is one of the preeminent causes of lasting psychological and physiological damages associated with the experience of childhood trauma. That said, most of these studies have been run using rodent models; thus, more research is needed into the physiological responses to trauma, as measuring depressive symptoms in a mouse does not directly translate to human emotionality but does provide evidence prompting further questioning. In this regard, present study draws on existing studies' findings of physiological changes and neurological alterations following childhood trauma in its attempt to address the socioemotional responses relating to trauma and posttraumatic growth.

To summarize current understandings of the physiological responses to trauma, it is first important to understand the individual's environmental contexts, which can interact to change genetic expression or influence an individual's future coping mechanisms. Traumatic stress experienced within these conditions, then, has an assortment of wide-reaching effects. Chronic activation of the HPA axis, amygdala, and other stress response pathways alter the volume and density of affected neural regions (following the developmental theory of "use it or lose it").

This can lead to abnormalities in the corticolimbic brain circuits which are associated with increased risk of psychopathology including depression, posttraumatic stress disorder, anxiety, personality disorders, and substance abuse among others. At the same time, chronic activation also leads to immune dysregulation. When the physiological effects of cellular damage are combined with chronic HPA axis activation, they can lead to other serious medical illnesses including immune disorders, obesity, diabetes, hypertension, liver and cardiovascular diseases, and more (see Tyrka et al., 2013). Beyond decreasing both quality and quantity of life for victims of Adverse Childhood Experiences, many survivors who choose to become parents give birth to children whose birth weights, stress response reactions, and neurological development reflect the parents' adversities (Stenz, Schechter, Serpa, & Paoloni-Giacobino, 2018; Liu, & Nusslock, 2018; Folger et al., 2018).

Resilience

It is important to note that, despite broad claims about the potential effects of childhood trauma on neurological development and functioning, the actual effect of childhood trauma on a single individual varies widely. In a review of literature on physiological responses to trauma to date, researchers found that studies examining the effects of a social support for survivors of trauma significantly *reduced* the likelihood that a survivor would develop psychopathology or other medical ailments as a result of the traumatic experience *even if they were genetically predisposed to psychopathology prior to the traumatic event* (Kaufman, Gelernter, Hudziak, Tyrka, & Coplan, 2015; McCrory et al., 2010). This phenomenon of social supports mediating the effects of childhood trauma, known more colloquially as Resilience, includes sociodemographic factors like age, racial or ethnic identity, and education as well as household structure, the presence of a caring adult or series of adults (either at home, in school, or in the

community), and life orientation. Psychological counseling and social work fields often offer these resilience factors as the answer to ACEs, though there is less information directly relating to college-aged survivors of childhood trauma.

Current literature assessing stress and coping in college students who have survived trauma found that individual differences are strongly related to the perceived severity of daily stress (Sladek, Doane, Luecken, & Eisenberg, 2016). For example, college students tend to find an exam environment to be a stress-inducing experience. However, the degree to which this stress is experienced, as well as an individual's coping mechanisms, work together to help the student move through the stressful experience and (ideally) finish the exam while demonstrating their competency with the subject. To provide further illustration, a well-adjusted college student can walk in to an exam environment, notice that their stress response is becoming active, and reassure themself that they have prepared for the exam, and that it will be alright. However, for students who have survived childhood trauma, this self-regulatory mechanism and individual variation in stress responsivity have been affected and altered by the experience of childhood trauma, potentially hindering their ability to self-regulate in a stressful environment and possibly leading to a lower test score than they would otherwise have achieved based on their knowledge of the test subject.

Fascinatingly, the stress response for how each individual copes with traumatic events differs, which can lead to drastically different outcomes. This phenomenon continues to baffle researchers (e.g., Waugh, Fredrickson, & Taylor, 2008), but the field of ACE research has come to call the set of factors that protect against the negative associated outcomes "resilience". Resilience, then, is a set of internal and external resources that develop from adversity and represent an individual's capacity to undergo adversity and come out with fewer negative

consequences than circumstances would create without the buffer. Some researchers have found that the presence of posttraumatic symptoms does not correlate with college GPA (Arnekrans et al., 2018; Granda, 2017), which supports the development of resilience during or before college. In other words, exposure to traumatic events does not inherently lead to worse academic performance.

Research by Granda (2017) found that social support is one of the most salient factors of resilience in college life. Other college resilience factors include prosocial adults/available staff and social emotional resources (Mohr & Rosén, 2017; Hixenbaugh, Dewart, &Towell, 2012), lack of concern for debts and college qualifications (Hixenbaugh, Dewart, & Towell, 2012), as well as nontraditional student status based on age over 25, full-time work status, and parenthood (Chung, Turnbull, & Chur-Hansen, 2017). Socioeconomic status has also been positively correlated with academic achievement (Harding, 2011). Ultimately, by using resilience factors to engage with posttraumatic growth processes, traditionally college-aged survivors of ACEs reported that they experienced personal and religious growth, increased knowledge and coping skills, and improved interpersonal relationships and parenting skills (Wright, Crawford, & Sebastian, 2007).

Posttraumatic Growth

Unfortunately, the tenants of resilience must be significantly modified to include factors like community support and identity connection to work for minority populations (Cronholm et al., 2015). However, recent studies have strongly correlated resilience factors and their unique contribution to improved outcomes with the posttraumatic growth (PTG) framework (Hooper, 2003; Mohr & Rosén, 2017). Like resilience, PTG relies on the pre-existence of traumatic experiences (Tedeschi & Calhoun, 1996). Moreover, the PTG themes of self-acceptance,

autonomy, purpose in life, sense of mastery, and personal growth offer insights about the underlying mechanisms of support provided by resilience factors (Shuwiekh, Kira, & Ashby, 2018; Frazier et al., 2009). These relationships make PTG a suitable measure for resilience factors, as well as a better measure of growth. Fortunately, unlike resilience, measures of PTG achieve high validity among racially diverse samples (Hooper, Marotta, & Depuy, 2009). Therefore, the rest of this research will focus on the relationship between ACEs and PTG.

The use of PTG increases researchers' ability to distinguish between levels of trauma with greater specificity. Solomon & Heide (1999) categorized trauma within the PTG framework by severity. Type I is a single instance or circumstantial event that quickly resolved; Type II a multiple occurrence or interpersonal threat; and Type III a multiple occurrence or interpersonal threat that occurs chronically or at a young age (Solomon & Heide, 1999). Within college students, PTG studies have found that, at low levels of PTG, severity of traumatic life experiences was negatively associated with college adjustment and positively associated with suicide; the reverse was also true (Sheline & Rosén, 2017). Researchers have also found that, broadly, PTG inversely relates to early childhood trauma, meaning that the greater the trauma the less growth can occur (Shuwiekh, Kira, & Ashby, 2018; Schott, 2016). Further research on the relationship between trauma types and PTG revealed that PTG experiences demonstrate an inverse U curve when related to trauma type, where Type II trauma provides the most opportunity for posttraumatic growth (Laufer & Solomon, 2006). Subsequent studies found that PTG was associated with Type I, but not Types II or III (Kira et al., 2013), and that Type III trauma hinders PTG whereas Type I trauma facilitates PTG (Shuwiekh, Kira, & Ashby, 2018). All of this is to say that previous research has related both trauma type and severity to an individual's unique ability to grow from adversity. In consideration of the type and severity of a

typical ACE, the present study seeks to investigate the relationship between Types II and III traumas and later growth.

Meaning Making and Posttraumatic Growth

As ACEs are frequently experienced as overwhelming instances of trauma, an individual's ability to shape their personal stories and truths becomes essential for future healing (Wright, Crawford, & Sebastian, 2007). While Type II and III traumas, such as childhood sexual abuse, are incredibly hard to shape and draw meanings from, Wright, Crawford, & Sebastian's investigation (2007) found that effective healing required the ability to acknowledge pain and suffering resulting from childhood sexual abuse. This process of reconstructing world views and personal narratives surrounding their experiences ultimately paved a path for future personal and interpersonal growth. In this way, meaning making from narrative (re)construction is intricately linked to PTGI outcomes, and is also heavily influenced by an individual's environment. The purpose of this narrative study is to understand key elements of the meaning-making processes regarding childhood trauma for first year students at Mount Holyoke College.

Framing

With consideration of the additional social stress that each marginalized identity bears, the present study is framed using a modified Minority Stress Theory (MST). In original MST work, Meyer (2003) aimed to describe how stressors impacted lesbian, gay, and bisexual individuals' access to healthcare and ultimate health disparities. This original model constructed an additive representation of oppression specifically for sexual minority individuals; however, just as discrimination is not limited to sexual orientation, this theory has been extended to other populations, including women and racial or ethnic minorities, with research finding significantly increased stressors and health disparities as an individual's disadvantaged identities intersect to

lead to increased instances of harassment, maltreatment, discrimination, and victimization (Meyer, Schwartz, & Frost, 2008). As elements beyond sexual minority status (including gender identity, racial or ethnic identity, and socioeconomic status) have been correlated with increases in ACE prevalence as well, a modified model of minority stress theory considering each aspect of an individual's experience is necessary for the present investigation.

A Hope for Healing

Fortunately, just as neurological structures are built, they can be rebuilt and molded to fit an individual's current needs with considerable work. Neuroplasticity, or the ability for the brain to continue shaping the way its neurons connect, allows for learning, personal growth, and behavior modification (Twardosz & Lutzker, 2010). Thus, while the future may seem bleak when considering the wide-reaching effects of childhood trauma, this is not a future to which survivors of childhood trauma are condemned. Researchers are actively exploring pharmacological interventions and psychotherapeutic approaches to improve survivors' symptoms and quality of life, and there are a few promising leads.

Pharmacological interventions. Research suggests that pharmacological interventions can reduce structural abnormalities in survivors of childhood trauma which may relate to the extinction of maladaptive traits as the subjects' symptomology improved (Thomaes et al., 2014). However, it is important to note that for a significant portion of clinical intervention participants, pharmacological interventions are only effective when paired with therapeutic interventions, likely due to the nature of childhood trauma. That is, pharmacological interventions allow an individual the space and freedom to rewire the way their brains process novel information, but without training and tools on more adaptive ways of navigating life's stressors they are largely

unable to benefit from pharmacological treatment long term (Tyrka et al., 2013). Thus, the need for psychotherapeutic approaches in conjunction with pharmacological intervention is clear.

Psychotherapeutic approaches. As with most developmental ailments, research tends to find that the prognosis for survivors of childhood trauma improves the earlier an intervention begins. While there are several interventions for children, resilient peer treatment and imaginative play training for children, and multi-systemic therapy for families (Allin, Wathen, & MacMillan, 2005), these are not necessarily relevant to the college-aged adult survivors. However, most survivors of childhood trauma do not have the opportunity to seek assistance for their experiences until after they have left the household (Banyard & Cantor, 2004). Many therapeutic approaches for college-aged adults have been studied, though only a few kinds of interventions lead to significant and lasting changes in an individual's cognitive processes, such as Trauma-Focused Cognitive Behavioral Therapy, which works with the individual to teach trauma-specific coping mechanisms while increasing exposure to the traumatic narrative with the goal of reducing responsiveness to triggers (Tyrka et al., 2013) and has been shown to produce significant and lasting improvements in corticolimbic pathways related to depression and posttraumatic stress disorder, as well as the anterior cingulate cortex and amygdala (Mahajan, 2018; Kaufman et al., 2015).

Alternative therapies. Among the most effective alternative therapies are mindfulness and meditation practices, which hone an individual's ability to focus on internalized emotions and process through them while strengthening their self-regulatory abilities (Tyrka et al., 2013). By promoting tools that help the individual positively reframe their life, meditation and mindfulness practices have been shown to increase neuroplasticity and healthy functioning of other organs, and in turn reduce the lasting effects of childhood trauma (Kaufman et al., 2015;

Price, Higa-McMillan, Kim, & Frueh, 2013). Other alternative tools which are less well-studied but still show promise for promoting psychological and neuroimmune regulation include yoga (Kaufman et al., 2015), therapeutic massage (Tyrka et al., 2013), music training (Kaufman et al., 2015), and vigorous or regular exercise (Kaufman et al., 2015; Price et al., 2013). These forms of alternative treatment are worth significant attention for two reasons: first, because of profound effects that studies have found when investigating their relationship to posttraumatic healing, and second, because many colleges and professional organizations in higher education are now pushing programs that promote these alternative methods of health, healing, and well-being.

College as a Critical Transition Period

When considering the multitude of approaches that, as well as the newfound freedom offered for individuals to explore treatment options once outside the home, it appears that college may be the first opportunity that many individuals must take control of their own mental and physical health in a meaningful way. In fact, the transition to college represents an important milestone for most young adults but holds even more significance for survivors of ACEs. College is the first opportunity that many victims of familial abuse can live outside the household, which allows them to finally begin the long journey of processing, coping with, and growing from traumatic events (Banyard & Cantor, 2004). Thus, the period just after one's entry to college seems like the most effective time to study posttraumatic growth. This is especially amplified by colleges' increased promotion of tools like mindfulness, yoga, and meditation – practices which are shown to increase neuroplasticity and facilitate neurological healing in adult survivors of childhood trauma.

However, college also presents a series of new challenges, including schedule management, long-term planning, increased autonomy, destabilized social networks, more

rigorous academics, and demands to continually improve one's ability to cope with negative emotions (Forester et al., 2018; Dawson & Pooley, 2013; Kepalaite, 2013; Lopez & Gormley, 2002). Due to heterosexism and cissexism, SGM college students may experience greater challenges in transitioning to college than those who do not have to deal with that added stress (Ryan, Futterman & Stine, 1998). This also applies to students of color, who may encounter additional barriers when compared with their white peers due to systemic racism. Regarding trauma, Wagner & Magnusson (2005) report that people of color may feel disinclined to disclose in the context of college because they fear doing so would only reinforce racist stereotypes. Ultimately, despite increased demands placed on college students, 91% of pre-college trauma survivors who remained enrolled reported some form of PTG by the end college (Mohr & Rosén, 2017).

Unfortunately, the lack of understanding about the links between trauma and pathways to growth drastically increases the need to study these subjects. With more than half of the average college population having survived at least one ACE, and upwards of 40% of enrolled students contending with some form of trauma, an understanding for the linkages emerges as a desperate need. Critically, the portion of students who enroll in college but never finish are at even greater risk than any point in history because, for many of these students, dropping out of college would leave them with loan debt (Arnekrans et al., 2018). These problems are even more critical to study for marginalized communities, as the system of higher education deprioritizes narratives of survival. Within higher education, there is a large culture of silencing survivors through enforcing the idea that emotion has no place in learning (Wagner & Magnusson, 2005). As Wagner & Magnusson reflect, this "imped[es] women's ability to learn to their full potential by not overtly addressing the issue of violence in women's lives and developing strategies to

support them in working to their full potential" (2005, p. 460). The silencing of healing processes predominates higher education and is detrimental to their success. Therefore, not only are young adults in their first year of college the ideal target for PTG study, colleges have a moral responsibility to solve problems related to adaptation and students' growing opportunities (Wang, Chen, Zhao, & Xu, 2006).

Why Might a Gender Inclusive Women's College be Different?

While many researchers have examined the effects of childhood trauma in college undergraduates, there are several deficits within current literature. Most have assessed traumatic events in childhood and ACEs with members of both binary genders or have focused on cisgender women at co-educational institutions (frequently due to a failure to attain statistical power for cisgender men). SGM individuals have been excluded from most studies. Knowing this, it possible to infer that the negative relationship between trauma severity and posttraumatic growth may be a result of the silencing culture within higher education specifically as it pertains to women. Despite the silencing culture, several studies have shown that while men view disclosures of childhood trauma negatively, women view other women's disclosures positively and rate the discloser's likability and competence significantly higher than control scenarios (Harter, Harter, Atkinson, & Reynolds, 2009). Other research has recorded this through qualitative interviews, with one subject eloquently summarizing it: "I carry unconditional love and offer nonjudgmental support for fellow survivors" (Wright, Crawford, & Sebastian, 2007, p. 602). Additionally, when supported by other women, females of all races are more likely to seek assistance with psychological counseling services (Sheu & Sedlacek, 2004).

Beyond this, Mount Holyoke College may be a particularly ripe place for examining these effects, as the College has recently won awards from the National Association of Student

Personnel Administrators, a group of higher education professionals, for its groundbreaking Be Well program. The Be Well program promotes previously acknowledged, and highly effective, methods of trauma healing and stress management through alternatives like meditation, yoga, mindfulness, and other practices which have been acknowledged as particularly effective methods of facilitating posttraumatic growth in adult survivors (Nyary, 2019). With these considerations, it is possible that the supportive networks created in an environment that embraces openness and growth with one's previous traumas, as may occur at a Gender Inclusive Women's College, could impact the inverse relationship between trauma severity and PTG. Given demographic differences in gender composition, as well as campus culture differences resulting from this composition, it is not unreasonable to believe there may be a different relationship between ACEs and PTG in the context of a Gender Inclusive Women's College.

Current Study

The first year of college is the ideal time to study these areas in undergraduate students, as trauma histories make navigating transition (to college or elsewhere) as especially difficult. Beyond this, college represents the first opportunity for many survivors of family-based trauma to heal from their traumatic experiences outside of their households. To my knowledge, no studies have focused on the unique experiences of navigating posttraumatic growth and meaning-making processes within the context of a Gender Inclusive Women's College. To add to the existing literature, the current study investigated posttraumatic outcomes (adjustment, PTG, and growth narratives) for survivors of Adverse Childhood Experiences within a Gender Inclusive Women's College environment, as well as student perceived influences of such an environment on their growth narratives.

Method

Participants and Recruitment

This project was ethically reviewed and approved by the Mount Holyoke College Institutional Review Board as a mixed-methods study drawing from Mount Holyoke first year students. Between January and February 2019, 131 participants were recruited to participate in the study using physical and digital flyers circulated around the Mount Holyoke College campus, mailing lists, and Facebook groups. Advertisements presented the nature of the study to be on college adjustment so as not to discourage those who have not experienced childhood trauma (a meaningful comparison group). Participants received the opportunity to enter a raffle for 1 of 10 $10.00 Amazon gift cards or be awarded research credit for completion of the quantitative survey; those who completed the qualitative survey received an additional $5 reward.

To be included, participants were between the ages of 18 and 24 and in their first year of attendance at Mount Holyoke College. Data cleaning consolidated racial/ethnic identity categories, adding South Asian and Multiracial at participants' suggestions. Additionally, household income categories and gender identity selections were consolidated to increase the statistical sensitivity of these identities. Then, 8 participants identifying as a class year other than 2022 and an additional 11 participants who did not specify a class year were removed. Participants who did not respond to each of the ACE category questions and those who completed less than 50% of the Post Traumatic Growth Inventory were also removed from the data pool. Of note, participants who indicated experiencing less than 2 ACEs and no Posttraumatic Growth were coded as not having experienced an ACE. After cleaning the data, 103 quantitative responses were considered complete and viable, and 17 of these participants also completed the qualitative portion of the study. This reflects best practices for a suitable

sample size, as recommended by an *a priori* gpower analysis and modified narrative analysis recommendations (Creswell, 2013).

Participants' racial identities included 43% White/European, 44% Southeast/East/South Asian, 2% African American/Black, 4% Hispanic/Latinx, and 5% Multiracial ethnicities. In comparison, Mount Holyoke College reported a student body demographic composition for the Spring 2019 semester which included 45% White students, 28% International students (50% of whom identify as Chinese), 10% Asian American, 7% Hispanic/Latino, 5% African American/Black, 3% Multiracial, and 1% unspecified. Thus, in terms of racial/ethnic identity, the current sample appears to be a representative sample of the campus, with slight over sampling of Asian and Asian American students as well as slight under sampling of African American or Black and Hispanic or Latinx students.

Of the sample, 72% reported that their highest educated guardian had attained at least a college education by the time of their birth, while 28% reported that their highest educated guardian had not attained or completed an undergraduate college education (but may have completed professional or trade schooling, or some undergraduate college with no degree attained). Regarding SES, 35% reported household earnings of $100,000, 53% reported household earnings between $30,000 and $100,000, and 12% reported household earnings less than $30,000. Of the sample, 7 participants identified as transgender or gender diverse; as a result, no separate analyses on the effects of gender identity were run. Most participants had completed at least 1 semester of college at Mount Holyoke (fall admits), though some had completed 0 (spring admits) or 2 (spring admits of the previous cycle) semesters. All participants self-identified as traditional-aged students who are members of the class of 2022.

Materials

College Adjustment Questionnaire. The first scale, the College Adjustment Questionnaire is comprised of 14 Likert-type response questions ranking items on a 5-point scale ranging from *not true* to *completely true* (O'Donnell et al., 2018). Responses assessed college adjustment in educational, relational, and psychological realms (Appendix B). This scale is relatively new, but early research in college students suggests that this brief measure has good reliability, with subscale Cronbach's alphas ranging between 0.79 to 0.89 and good convergent validity with subscale Person's *r* ranging between 0.65 and 0.69), meaning that the measures accurately and reliably assess adjustment constructs (O'Donnell et al., 2018). Existing research has not indicated that the scale is correlated with ethnicity, year in school, or gender.

Multidimensional Scale of Perceived Social Support. The second scale, the Multidimensional Scale of Perceived Social Support, is comprised of 12 Likert-type response questions ranking items on a 7-point scale from *very strongly disagree* to *very strongly agree* (Zimet et al., 1988). Responses assessed perceived social support from family, significant other(s), and peers (Appendix C). This scale has consistently been a reliable (Cronbach's alpha = 0.88) and temporally stable (Cronbach's alpha = 0.85) measure of perceived social support that exists independently of anxiety and depression with a Pearson's *r* of only -0.25 (Zimet et al., 1988).

Expanded Adverse Childhood Experience Scale. The third scale, the Expanded Adverse Childhood Experience battery, is comprised of 21 questions, with a mixture of eight yes/no and 13 Likert-type scale responses on varying scale lengths (Cronholm et al., 2015). Responses assessed childhood adversity and trauma from diverse life perspectives (Appendix D). This scale was piloted in the diverse community of Philadelphia and has thus produced more

accurate population measures than the original ACE Study by Felitti et al (1998). The questions are tallied with simple yes/no rankings (which give an additional point to one's ACE score) that vary based on current knowledge about childhood trauma, with a maximum score of 14.

Posttraumatic Growth Inventory. The final scale, the Posttraumatic Growth Inventory, is comprised of 21 Likert-type response questions ranking items on a 6-point scale from *I did not experience this change as a result of my crisis* to *I experienced this change to a very great degree as a result of my crisis* (Tedeschi & Calhoun, 1996). Responses assessed posttraumatic growth in relational, spiritual, personal, outlook, and appreciation aspects of life (Appendix E). This scale has consistently been a reliable (Cronbach's alpha = 0.90) measure of posttraumatic growth. Additionally, research has not indicated relationships to demographic variables or social desirability.

Procedure

Participants were directed to an anonymous online data collection form hosted on SurveyMonkey. There, they read and accepted a consent waiver that detailed the sensitive nature of the subject and ensured that they may discontinue the survey at any time. After consenting, they completed a brief demographics and survey eligibility screening form to ensure they meet the inclusion criteria. Participants then continued to the main data collection phase, which consisted of several yes/no or Likert type scales including the College Adjustment Questionnaire (CAQ), the Multidimensional Scale of Perceived Social Support (MSPSS), the Expanded Adverse Childhood Experiences scale (Expanded ACEs or E-ACEs), and the Posttraumatic Growth Inventory (PTGI). Upon completion of the multiple choice scales, participants who scored positively on any aspect of the E-ACE measure had an opportunity to briefly reflect on the ways in which a gender inclusive college environment has affected their narratives of trauma

(Appendix F), meaning that the recruitment for the qualitative portion of the study was a mixture of convenience and criterion sampling. After completing or opting to skip the narrative response, participants were directed to a debriefing page which thanked them for their time, offered information about mental health services, and supplied a description of the purpose of the study. All data collected during this process was completely anonymous and passcode locked to ensure participant privacy.

Of key importance to this concept is the idea that asking emerging adults, many of whom are outside the home environment which they grew up in for the first time in their lives, to recount potentially traumatic events and their perceived effects may cause more harm than benefit. However, a systematic review of 19 adult studies by Appollis et al. (2015) suggests that an overwhelming majority (95%) of studies that asked participants to reflect on their experiences of childhood trauma had participants reporting significantly more benefits (reported by 92% of participants) than harms (reported by 25% of participants) or regrets (reported by 2% of participants). Thus, Appollis et al. (2015) conclude that there is overwhelming evidence that talking about one's experiences of childhood trauma are overwhelmingly beneficial and may promote healing through self-analysis. This remains true even in qualitative surveys, where most participants reported reliving their experiences yet none believed the survey to be emotionally harmful or requiring of professional support because of the questions asked; rather, a significant majority believed they benefited from the qualitative survey (Appollis et al., 2015). Additionally, Research by Brewin, Andrews, and Gotlib (1993) has found that recall of childhood experiences, particularly those regarding early traumatic experiences, is reasonably accurate even in cases of subsequent mental illness, further attesting to the maintenance of truthfulness within the responses collected. Thus, given the ability to complete the study at one's

own pace and the knowledge that most trauma survivors benefit from being able to discuss their past adversities in a research setting, it is highly unlikely that participants would either have discontinued because of ongoing trauma or provided false responses.

Analysis

Quantitative analysis. Data from the quantitative measures was collected and cleaned, then analyzed using SPSS and PROCESS (Hayes, 2013). Prior to statistical testing, correlations were run between all variables to assess significant relationships and justify further analysis. Based on significantly correlated factors, linear regressions were run for E-ACEs (predictor variable), college adjustment (predictor variable), social support (predictor variable), marginalized racial identity (predictor variable), and posttraumatic growth (outcome variable). Linear regressions were also run for E-ACEs (predictor variable), social support (predictor variable), and college adjustment (outcome variable). An independent samples t-test was run to were run to assess whether there is a significant difference between reports of Expanded Adverse Childhood Experiences (outcome variable) for transgender and nonbinary participants (group 1) as compared to cisgender participants (comparison group), as well as for whether there is a significant difference between reports of Expanded Adverse Childhood Experiences (outcome variable) for students who endorse a marginalized racial/ethnic identity (group 1) as compared to white students (comparison group). Lacking power to run a t-test, comparative demographics were collected for students who identified as transgender or nonbinary (group 1) and those who did not (comparison group). Finally, moderation models using significantly correlated factors will be utilized to examine the effects of social support (moderating variable) on the relationship between E-ACE score (predictor variable) and college adjustment (outcome variable), as well as

the effects of social support (moderating variable) on the relationship between E-ACE score (predictor variable) and posttraumatic growth (outcome variable).

Qualitative analysis. Based on guidelines outlined by John Creswell (2013), the analysis process began by assigning each participant's narrative an ID number, then reading through the text of each transcript and using margin notes to form initial codes. Open codes, the very first codes assigned to data, included sentence-by-sentence summaries and direct excerpts, like "time given maturity" and "peace of mind." From there, these were classified into focused coding groups, which included subjects like Increased Understanding from College, Parental Sacrifice Mitigating ACE, and Internalizing Trauma. Then, these were further distilled into categories like College Reframings, College Struggles, College Tools, and Healing Before College. Throughout this coding and processing, the researcher recorded memos to document the analytic process and aid in breakthroughs about possible relationships between different pieces of data. Constructivist narrative analysis was selected for analysis of participant responses as it highlights individual experiences in relationship to their identities, often centering on turning points and key elements (Creswell, 2013). Additionally, narrative analysis emphasizes the importance of context when assessing affects (how the environment impacts narrative formation) and effects (how the created narrative may serve in the individual's healing processes) of narrative creation, which is the main point of investigation for this portion of the study. Using this analysis method allowed examination of participants' self-generated meanings with sensitivity for social, interpersonal, and cultural contexts (Esin, Fathi, & Squire, 2014). Most importantly, constructivist narrative analysis emphasized the ever-changing nature of participants' relationships with their childhood trauma. That said, all analyses occurred with an acknowledgement of the modified minority stress theory (discussed in the literature review to be

inclusive of sexual, gender, and racial minorities) in a way that places value on varied experiences of oppression within posttraumatic growth.

Results

Measure Validity and Reliability

In the present study, the College Adjustment Questionnaire had a Cronbach's alpha of 0.884, thus the scale appears to reliably measure college adjustment within the current sample. In correspondence with previous studies, the CAQ was not associated with any measured demographic factor. The Multidimensional Scale of Perceived Social Support had a Cronbach's alpha of 0.907, thus the scale appears to reliably measure social supports within the current sample. The MSPSS was not associated with any measured demographic factor. The Expanded Adverse Childhood Experiences battery found that, in the present study, 82.5% (n = 85) participants reported experiencing at least one ACE before entering college, and the mean score for these participants was 3.3 (*SD* = 2.16). A detailed account of the type of childhood adversity reported by each person who reported experiencing at least one childhood trauma is included in Table 1. The E-ACE scale maintained a Cronbach's alpha of 0.800, thus it appears to reliably measure events of Adverse Childhood Experiences within the current sample. It was not associated with any measured demographic factor, but was negatively associated with participants' self-reported GPA ($r(103)= -0.22$, $p = 0.02$). Last, the Posttraumatic Growth Inventory maintained a Cronbach's alpha of 0.963 in the present study, thus the scale appears to reliably measure posttraumatic growth within the current sample. It was significantly associated with marginalized ethnic/racial identity. It was not associated with any other measured demographic.

Table 1

Frequency of ACE Type for those Reporting at least 1 ACE

Adverse Childhood Experience	Percentage Reporting
Emotional Abuse	53 (62.3%)
Emotional Neglect	9 (10.6%)
Physical Abuse	30 (35.3%)
Physical Neglect	1 (1.2%)
Domestic Violence	12 (14.1%)
Neighborhood Insecurity	39 (45.9%)
Witness of Violence	13 (15.3%)
Bullying	20 (23.5%)
Discrimination	25 (29.4%)
Sexual Abuse	15 (17.6%)
Incarceration of Family Member	4 (5.9%)
Household Substance Abuse	19 (22.4%)
Household Mental Illness	45 (52.9%)
Fostercare	4 (5.9%)

Note. N = 85

An independent samples t-test was run between PTGI scores for students of color (M = 69.18, SD = 19.97) and white students (M = 59.09, SD = 22.94) who reported Adverse Childhood Experiences and found that t(85)= -2.15, p = 0.035. An analysis of variance was conducted to determine whether this was driven by a single marginalized racial identity group, and was not significant, F(2, 82) = 2.36, p = 0.101; results of this analysis are reported in Figure 1 and Table 2. No data was collected on participants' nationality, so no statement can be made to determine whether this relates to international student status. These results can be interpreted to mean that SOC experienced significantly more posttraumatic growth than their white counterparts, and this relationship was controlled for in further analyses.

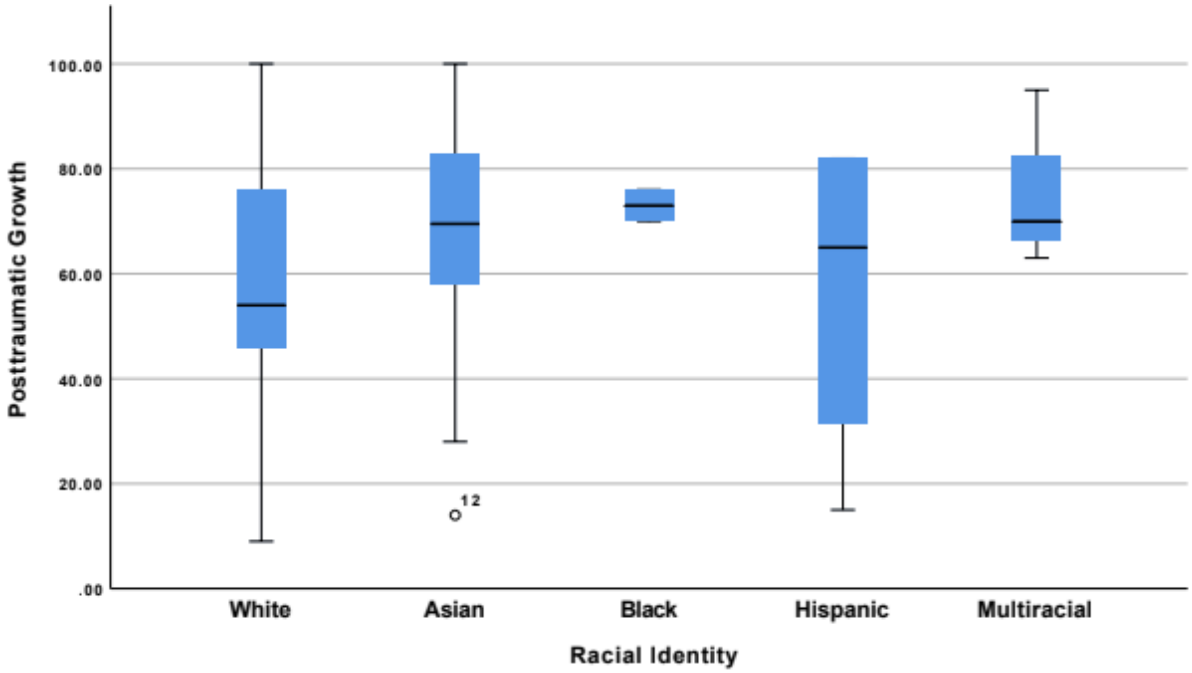
When preliminary correlations were run, posttraumatic growth was not found to be related to any scale and was only related to the demographic of marginalized racial identity (r = 0.23, p = 0.04). At the same time, college adjustment was significantly correlated with both social support (r = 0.48, p < 0.001) and ACE score (r = -0.36, p = 0.001). As a result, data were analyzed using both the originally proposed PTG regression and a second regression with these significantly related features where ACE score and social support acted as predictor variables, and college adjustment served as the outcome variable to fully represent the findings of the present investigation.

Comparing Childhood Adversity for Gender Minority Individuals

While the original study proposed running an independent samples t-test to assess whether there was a significant difference between reports of Adverse Childhood Experiences for transgender and nonbinary participants as compared to cisgender participants, only eight of the 103 respondents identified under the transgender umbrella. As a result, there is a lack of power to make conclusively representative statements about the transgender and gender

Figure 1

Box plot of posttraumatic growth score by racial identity (detailed) for ACE survivors.



This chart is a visualization for reader assistance. There is high risk of Type I error within these results as reported in this Figure, as there were only 11 total participants in the combined Black, Hispanic, and Multiracial groupings. For statistical analysis purposes these three groups were combined into "Students of Color" for ANOVA testing to lessen this risk.

Table 2

One-way analysis of variance test comparing posttraumatic growth scores for white, Asian, and Other racial identities.

	Sum of Squares	*df*	Mean Square	F	Sig.
Between Groups	2139.04	2	1069.52	2.355	0.101
Within Groups	37243.27	82	454.19		
Total	39382.31	84			

nonconforming populations of Mount Holyoke College; instead, descriptive statistics for the two groups are reported alongside one another in Table 3, though the findings for this remain inconclusive.

Comparing Childhood Adversity for Individuals with Marginalized Racial Identities

An independent samples t-test was run comparing reports of Adverse Childhood Experiences for students who endorsed a marginalized racial/ethnic identity (students of Color or SOC) and those who endorsed a white identity. There was not a significant difference in ACE scores for SOC (M = 2.90, SD = 2.32) and those for white students (M = 2.67, SD = 2.20); t(101)= -0.511, p = 0.40. These results suggest that SOC were no more likely than white students to report a history of Adverse Childhood Experiences, and those that did reported a similar level of adversity. A graphical representation of this is presented in Figure 2.

Regression of Childhood Adversity, Social Support, and College Adjustment to Growth

A stepwise model with posttraumatic growth as the outcome variable was generated to analyze the data. Marginalized racial identity was entered at Step One of the regression to control for a previously recognized association between PTG and marginalized racial identity. The participant's Adverse Childhood Experiences score was entered at Step Two; experience of social support was entered at Step Three; and, degree of college adjustment was entered at Step Four. These measures come from participant scores on the Expanded Adverse Childhood Experiences measure, the Multidimensional Scale of Perceived Social Support, the College Adjustment Questionnaire, and self-identified racial/ethnic status. Variables were entered at separate steps to examine how the addition of each predictor uniquely contributed to the model and to determine the individual variance explained by each of the predictor variables. Regression statistics are reported in Table 4.

Table 3

Comparison of Differences Based on Gender Identity

Characteristics	Cisgender (n = 95)	Transgender (n = 8)
GPA	3.64 (*0.38*)	3.27 (*0.15*)
Semesters at College	1.05 (*0.40*)	0.75 (*0.71*)
Racial Identity	55.7% SOC	62.5% SOC
	44.2% White	37.5% White
Highest Guardian Ed	25.3% Below College	62.5% Below College
	74.7% College Graduate	37.5% College Graduate
ACE Score (of 14)	2.65 (*2.17*)	4.50 (*2.73*)
CAQ Score (of 5)	3.45 (*0.78*)	3.40 (*0.93*)
MSPSS Score (of 7)	5.50 (*1.10*)	5.14 (*1.71*)
PTGI Score (of 147)	58.65 (*28.80*)	76.34 (*23.35*)

Figure 2

Box plot comparing means and standard deviations of ACE score reported by racial identity category for white students and students of color.

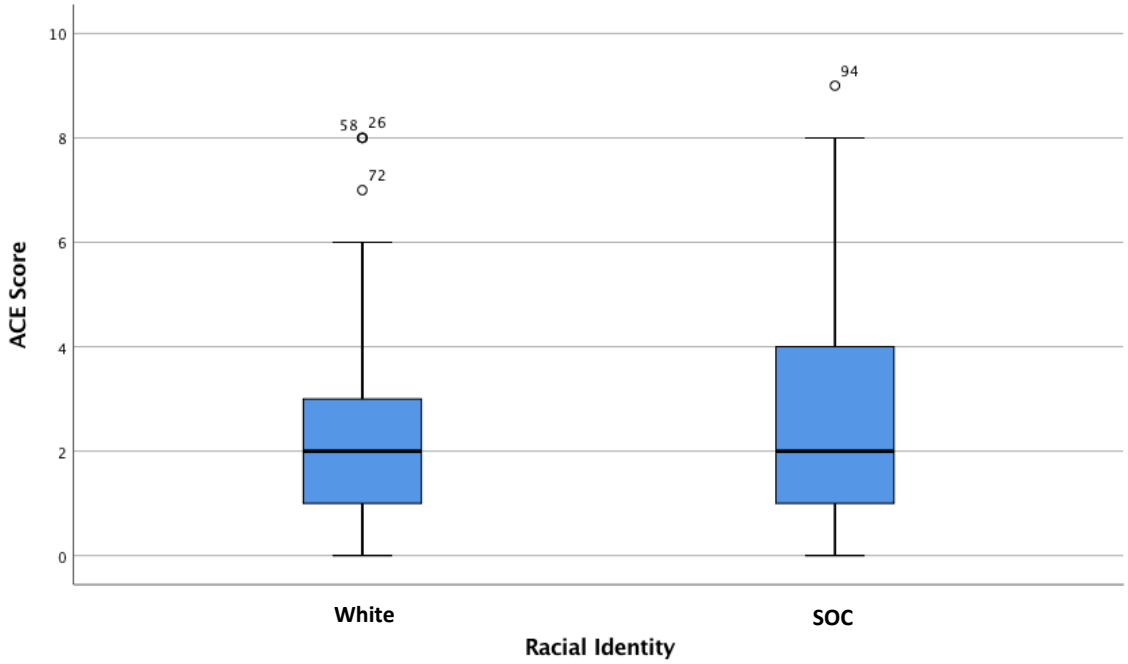


Table 4

Step Wise Regression Relating ACEs, Social Support, and College Adjustment to Growth

Variable	*b* (*S.E.*)	*p*	sr^2	R	R^2	ΔR^2
Step 1	59.09 (*3.64*)	< 0.001		0.230	0.053	0.053
Marginalized Race Id.	10.09 (*4.69*)	0.035	0.05			
Step 2	56.38 (*5.10*)	< 0.001		0.244	0.059	0.007
Marginalized Race Id.	10.14 (4.71)	0.034	0.05			
ACE Score	0.82 (*1.08*)	0.450	0.007			
Step 3	25.54 (*14.89*)	0.090		0.335	0.112	0.053
Marginalized Race Id.	10.60 (*4.61*)	0.024	0.06			
ACE Score	2.19 (*1.22*)	0.078	0.03			
Social Support	4.91 (*2.23*)	0.031	0.05			
Step 4	20.12 (*16.33*)	0.222		0.346	0.120	0.007
Marginalized Race Id.	10.51 (*4.62*)	0.026	0.06			
ACE Score	2.24 (*1.24*)	0.063	0.04			
Social Support	4.17 (*2.41*)	0.087	0.03			
College Adjustment	2.65 (*3.24*)	0.416	0.007			

Note. N = 84

The first stepwise regression was statistically significant, $F(1, 83) = 4.62$, $p = 0.035$. Marginalized racial identity contributed significantly to the regression model. Introducing the ACE score in the second step produced a non-significant model, $F(2, 82) = 2.59$, $p = 0.082$. Introducing participants' social support and connectedness in the third step maintained marginalized racial identity as a significant contributor to the model, and added social support as a significant contributor to the regression as well, $F(3, 81) = 3.42$, $p = 0.021$. ACE score did not significantly contribute to Model 3. Introducing college adjustment in the final step of the model maintained marginalized racial identity as a significant contributor, and removed social support as a significant contributor to the regression model, $F(4,80) = 2.72$, $p = 0.035$. ACE score, social support, and college adjustment were non-significant contributors to Model 4. As this model demonstrated a weaker F value than previous models, it was determined that Model 3 was most representative of the construct being analyzed and further analysis focused on findings presenting in Model 3.

In the third step of the model, marginalized racial identity and social support accounted for 5.8% and 5.3% of the variation in participants' experience of posttraumatic growth, respectively. Marginalized racial identity was a significant predictor of posttraumatic growth ($b = 10.60$, S.E. $= 4.61$, $p = 0.02$). For participants who endorsed a marginalized racial identity, scores on the posttraumatic growth scale increased by 10.6 units. Additionally, social support was a significant predictor of posttraumatic growth ($b = 4.91$, S.E. $= 2.33$, $p = 0.03$). For every one unit increase in scores on the Multidimensional Scale of Perceived Social Support, scores of posttraumatic growth increased by 4.91 units when all other predictor variables are held constant. When all variables were included in Step Three of the regression model, a participant's ACE score was not a significant predictor of posttraumatic growth. Together the

three independent variables of marginalized racial identity, ACE score, and social support accounted for 11.2% of the variance in participants' experience of posttraumatic growth.

Regression of Childhood Adversity and Social Support to College Adjustment

A stepwise model with experience of college adjustment as measured by the College Adjustment Questionnaire as the outcome variable was generated to analyze the survey results, based on information from an earlier correlation test. Each of the 14 adverse childhood experiences measured by the E-ACE scale (emotional abuse, physical abuse, household domestic violence, the witness of violence, neighborhood insecurity, bullying, emotional neglect, discrimination, sexual abuse, incarceration of a family member, household substance abuse, household mental illness, and the experience of foster care) were entered separately at Step One of the regression. Participants' perceptions of social support from a significant other (partner), family, and friends measured by the Multidimensional Scale of Perceived Social Support were separately entered at Step Two. Variables were entered at separate steps to examine how the addition of each predictor uniquely contributed to the model and to determine the individual variance explained by each of the predictor variables. Regression statistics are reported in Table 5.

The first stepwise regression model was statistically significant, $F(13, 70) = 2.81$, $p = 0.003$. Childhood experiences of emotional neglect and sexual abuse contributed significantly to the regression model. Introducing perceived social support from significant others, family, and friends in second step maintained sexual abuse as a significant contributor, removed the experience of emotional neglect as a significant contributor, and added the perception of social support from friends and emotional abuse as a significant contributors to the regression model, $F(16, 67) = 3.93$, $p < 0.001$. These items (emotional abuse, sexual abuse, and friend support)

Table 5

Step Wise Regression Relating Childhood Adversity and Social Support to College Adjustment

Variable	*b* (*S.E.*)	*p*	sr^2	R	R^2	ΔR^2
Step 1	3.89 (*0.16*)	< 0.001		0.586	0.221	0.343
Emotional Abuse	-0.28 (*0.20*)	0.162	0.02			
Physical Abuse	0.12 (*0.22*)	0.589	0.003			
Domestic Violence	0.17 (*0.27*)	0.533	0.004			
Witness of Violence	0.39 (*0.24*)	0.110	0.02			
Neighborhood Insecurity	-0.35 (*0.18*)	0.058	0.03			
Bullying	-0.11 (*0.19*)	0.589	0.003			
Emotional Neglect	-0.62 (*0.28*)	0.030	0.05			
Discrimination	-0.19 (*0.19*)	0.316	0.01			
Sexual Abuse	-0.69 (*0.28*)	0.004	0.09			
Incarceration	-0.21 (*0.40*)	0.603	0.003			
Substance Abuse	-0.21 (*0.24*)	0.385	0.007			
Mental Illness	0.05 (*0.19*)	0.791	0.001			
Foster Care	-0.59 (*0.39*)	0.137	0.02			
Step 2	2.946 (*0.56*)	< 0.001		0.696	0.361	0.141
Emotional Abuse	-0.41 (*0.20*)	0.044	0.03			
Physical Abuse	0.02 (*0.21*)	0.911	0.0001			
Domestic Violence	0.03 (*0.25*)	0.896	0.0001			
Witness of Violence	0.36 (*0.22*)	0.103	0.02			
Neighborhood Insecurity	-0.28 (*0.18*)	0.114	0.02			

Variable (*continued*)	*b* (*S.E.*)	*p*	sr^2	R	R^2	ΔR^2
Bullying	-0.051 (*0.18*)	0.778	0.001			
Emotional Neglect	-0.24 (*0.27*)	0.375	0.006			
Discrimination	-0.08 (*0.17*)	0.635	0.002			
Sexual Abuse	-0.52 (*0.21*)	0.017	0.05			
Incarceration	0.12 (*0.38*)	0.747	0.001			
Substance Abuse	-0.25 (*0.23*)	0.268	0.01			
Mental Illness	0.15 (*0.18*)	0.405	0.005			
Foster Care	-0.48 (*0.36*)	0.209	0.01			
Sig. Other Support	-0.06 (*0.07*)	0.389	0.006			
Family Support	-0.06 (*0.06*)	0.314	0.008			
Friend Support	0.28 (*0.07*)	< 0.001	0.12			

Note. N = 84

accounted for 3.2%, 4.6%, and 11.6% of the variation in participants' experience of college adjustment, respectively.

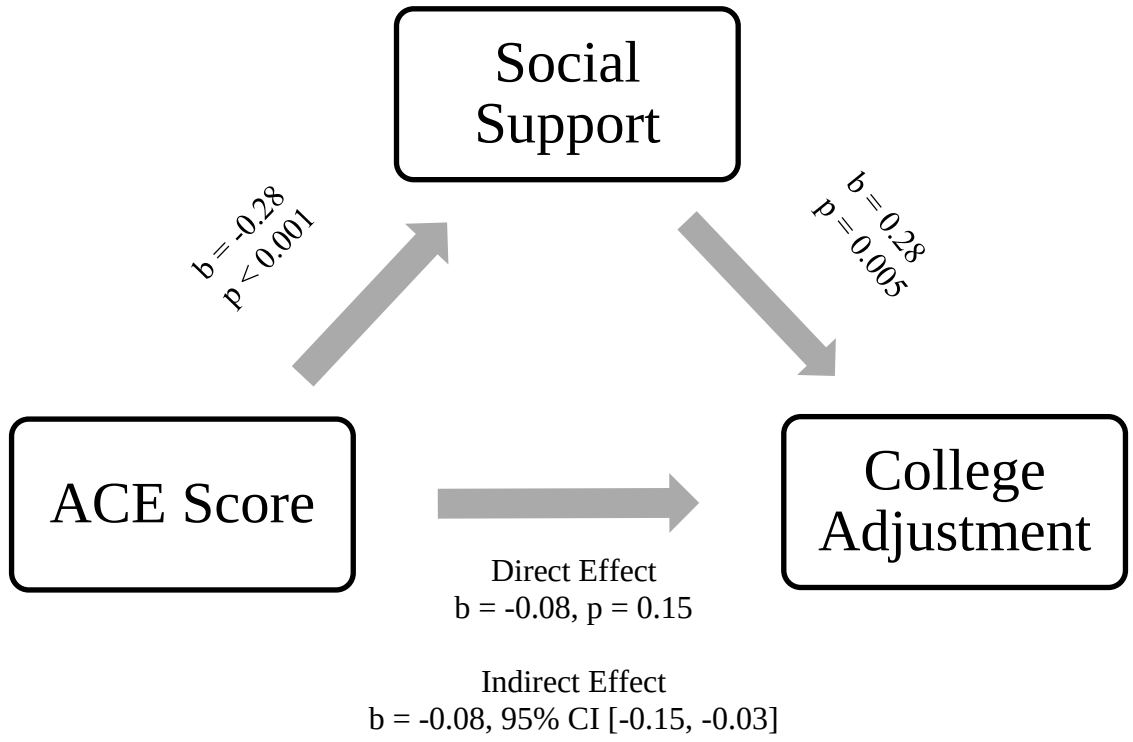
In the second model, the experience of emotional abuse as a child was a significant predictor of college adjustment (b = -0.41, S.E. = 0.20, p = 0.044). For those who reported experiencing emotional abuse as a child, scores on the college adjustment scale decreased by 0.41 units when all other predictor variables are held constant. The experience of sexual abuse as a child was also a significant predictor of sexual college adjustment (b = -0.52, S.E. = 0.21, p = 0.017). For those who reported experiencing sexual abuse as a child, scores on the college adjustment scale decreased by 0.52 units when all other predictor variables are held constant. The perception of friends' social support was a significant predictor of college adjustment (b = 0.28, S.E. = 0.07, $p < 0.001$). For every one unit increase in scores on a participant's perception of social support from friends, scores on the college adjustment scale increased by 0.28 units when all other predictor variables are held constant. When all variables were included in Step Two of the regression model, the experiences of physical abuse, household domestic violence, the witness of violence, neighborhood insecurity, bullying, emotional neglect, discrimination, incarceration of a family member, household substance abuse, household mental illness, and the experience of foster care, as well as the perceptions of family and significant other support were not significant predictors of participants' experience of college adjustment. Together the independent variables accounted for 36.1% of the variance in participants' experience of college adjustment.

Social Support Mediation of Childhood Adversity and College Adjustment

Experience of social support significantly mediated the relationship between ACE score and college adjustment. As Figure 3 illustrates, the regression coefficient between participants'

Figure 3

Mediation Model of participants' social support on Adverse Childhood Experiences and college adjustment.



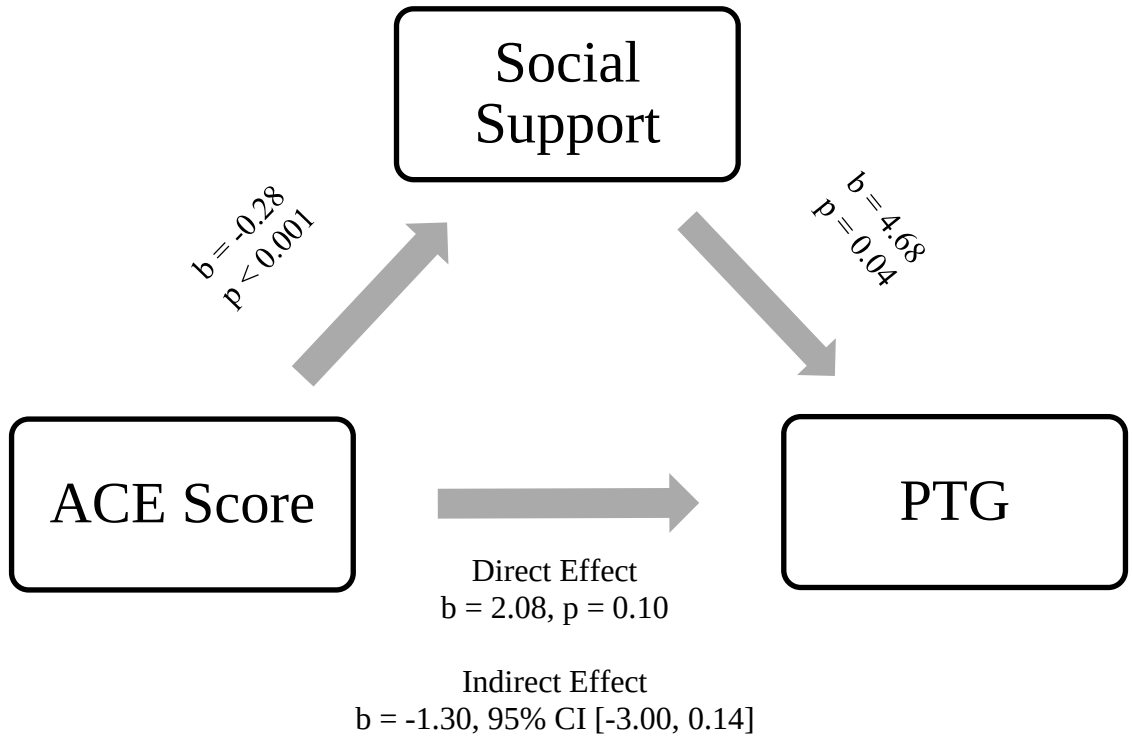
Adverse Childhood Experiences and their experience of social support was statistically significant and negative, while the regression coefficient between participants' experience of social support and college adjustment was statistically significant and positive. The indirect effect was (0.28) (-0.06) = -0.0168. We tested the significance of the indirect effect using bootstrapping procedures. Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects of the 5th and 95th percentiles. The bootstrapped unstandardized indirect effect was -0.08, and the 95% confidence interval ranged from -0.15 to -0.03. Thus, the indirect effect was statistically significant. This indicates that Adverse Childhood experiences significantly predicted lower social support, and in turn access social support predicted greater adjustment. Meanwhile, Adverse Childhood Experiences had no direct effect on college adjustment while the indirect effect was negative and significant. Thus, while Adverse Childhood Experiences do not directly affect college adjustment, they do negatively affect adjustment through the mechanism of reduced social support. The effect size of this significant mediation is 0.98, meaning that experience of social support explains 98% of the total effect of Adverse Childhood Experiences on participants' college adjustment.

Social Support Mediation of Childhood Adversity and Posttraumatic Growth

Experience of social support significantly mediated the relationship between ACE score and posttraumatic growth. As Figure 4 illustrates, the regression coefficient between ACE score and participants' experience of social support was statistically significant and negative, while the regression coefficient between participants' experience of social support and posttraumatic growth was statistically significant and positive. The indirect effect was (2.08) (4.68) = 9.73. The same bootstrapping procedures described above were used to test the mediation. The

Figure 4

Mediation Model of participants' social support on Adverse Childhood Experiences and posttraumatic growth.



bootstrapped unstandardized indirect effect was -1.30, and the 95% confidence interval ranged from -3.00 to 0.14. Thus, the indirect effect was not statistically significant. This indicates that Adverse Childhood experiences significantly predicted lower social support, and in turn access social support predicted greater posttraumatic growth. Meanwhile, Adverse Childhood Experiences had no direct or indirect effect on posttraumatic growth. Thus, while Adverse Childhood Experiences did not directly affect posttraumatic growth either directly or through the mechanism of reduced social support.

Narrative Analysis

Participants' reflections on their experiences with posttraumatic growth and its interaction within the context of a Gender Inclusive Women's College underwent a modified version of constructivist narrative analysis (Esin, Fathi, & Squire, 2014). Responses from 17 participants were analyzed, which is slightly above the standard 10 to 15 interviews recommended for narrative analysis (Creswell, 2013). Findings from this analysis are presented in the current section, which focuses on a standard process and support system that an individual experiences while reframing their own narratives with childhood trauma. Of note, quotes which contain bolded text had this added afterward by the researcher as a means of emphasizing key points in a broader narrative context.

Prevalence of adversity among participants. Participants who completed the narrative response identified primarily as white (9) and Asian or Asian American (5), with the remaining two participants identifying as Black or Latinx, respectively. Of these, 12 participants identified as having parents who had completed a college education by the time of their birth, and one participant identified as transgender. Of note, participants who did not specify a gender pronoun in their responses were coded as female when they did not identify as transgender. The

participant who identified as transgender, Elli, identified as gender fluid, genderqueer, and nonbinary; thus, gender neutral pronouns were selected to reference this participant's responses out of respect for their stated gender identity and in the absence of known pronouns. Participants' demographic identifiers and scale scores are reported in Table 6.

Most participants disclosed details for at least part of their reported childhood adversities as part of their narrative responses reflecting on ways they have grown with these experiences in college, however two participants did not mention any specific form of ACE. The following contextualizing information is reported based on the 15 participants who chose to disclose the specific nature of their adversity in their narratives. For the traditional ACEs, five participants reported emotional abuse, three reported emotional neglect, three reported physical abuse, three reported physical neglect, two reported sexual abuse, seven reported household mental illness (six parental and one sibling), two reported parental substance abuse, and two reported witnessing domestic violence. While not measured in this study, two participants' narratives highlighted their experience of violent parental divorce, which is notable as this category existed in the original ACE measure. For the expanded ACEs, three reported extended parental absence or incarceration, four reported discrimination (three based in queer identity and one based in racial identity), one reported neighborhood insecurity, and three reported bullying. No participants reported witnessing violence outside the household or experiencing foster care. Of note, four individuals reported what was tagged as *Intergenerational Transmission of Trauma*, with three reporting that at least one of their parents had been severely abused as a child and one reporting that their experience of sexual and physical abuse was normalized through community standards of affection and punishment. In sum, the adversities reported by the 15 participants

Table 6

Data on Qualitative Response Participants

Pseudonym	ACE	MSPSS	CAQ	PTGI	Racial Identity	Adversities Reported
Brielle	8	5.75	4.14	77	White/European	EA, PA, DV, WV, Nei, Inc, Sub, Ill
Nevaeh	8	1.50	1.93	64	White/European	EA, WV, Nei, Bul, Disc, SA, Sub, Ill
Paisley	7	7.00	4.21	96	White/European	EA, PA, DV, WV, Nei, Bul, Ill
Serenity	7	7.00	3.14	93	Asian/American	EA, PA, DV, WV, Bul, Disc, SA
Mila	7	6.25	2.29	83	Asian/American	EA, PA, DV, Nei, Disc, SA, Ill
Elli*	7	4.50	2.00	82	Hispanic/Latinx	EA, PA, Nei, Bul, En, Disc, Ill
Genesis	6	1.25	1.00	47	Asian/American	EA, Nei, Disc, Inc, Sub, Ill
Eliana	5	6.25	3.00	67	White/European	EA, PA, Nei, Sub, Ill
Lucy	4	5.00	3.36	81	Asian/American	EA, Disc, Sub, Ill
Jasmine	4	5.00	3.29	70	White/European	EA, PA, Nei, Ill
Athena	3	4.50	3.79	76	Asian/American	DV, Nei, Disc
Aubrey	3	5.50	3.57	51	White/European	EA, SA, Ill
Hazel	3	4.75	3.29	52	White/European	EA, Bul, Ill
Grace	3	7.00	2.92	96	Asian/American	EA, PA, Sub
Josephine	3	6.25	2.64	65	White/European	EA, Bul, Ill
Anna	3	6.00	2.14	49	White/European	SA, Sub, Ill
Katherine	1	6.25	2.93	70	Black/African	Nei

* = Participant identifies as transgender.
Type of Adversities: Emotional Abuse (EA), Physical Abuse (PA), Domestic Violence (DV), Witness of Violence (WV), Neighborhood Violence (Nei), Household Substance Abuse (Sub), Discrimination (Disc), Household Mental Illness (Ill), Bullying (Bul), Fostercare (Fos), Sexual Abuse (SA), Emotional Neglect (EN), Physical Neglect (PN)

who chose to disclose cover almost all the Adverse Childhood Experiences, with emotional abuse, household mental illness, and the experience of discrimination being common themes.

Pre-College Experiences

Internalizing trauma. Several participants mentioned some sort of internalization of blame–either through self-blame or internalized discrimination. Sometimes, this internalization of blame came from the nuclear family, as Brielle reflects:

> I never understood why my parents hit each other or why she drank or why she would get so mad at me for tiny things or why we couldn't afford food sometimes or why **she always made me feel like I had nothing to ever be sad about.** I grew up feeling guilty for having bad days. Because "it could be so much worse".

Other times, internalization of blame came from community and peers, like Eliana:

> When I was younger, **I was made partially by society, and partially by other members of my father's family, to feel guilty** for the times I cut off communication with him, and refused to see him or go to his house. I would be told "girls should listen to their fathers" and "he is your family, you have to get along with family," and other bullshit like that.

In a few circumstances, participants reported feeling like the pressure to internalize was endogenous, as in the case of Mila:

> [I experienced sexual abuse but was not] able to even understand what that really meant, because culturally, definitions of boundaries and parenting varied and because **labeling something as innocent as parental love as "sexual abuse" felt inexplicably impossible.**

Participants reported feeling stifled and stuck in environments that encouraged them to internalize responsibility for their Adverse Childhood Experiences. Most expressed dealing with it in some way, or that it negatively impacted their mental health and may have contributed to the development of mental illness (discussed in the next section). Of note, though, two participants recall attempting to address this sense of helplessness and isolation by acting out against their parents through violation of social norms–with Mila acknowledging that being arrested for shoplifting was a "reality check" for her parents.

Mental illness. Half of the participants reporting effects of ACEs before college noted that their adversity and a lack of support lead to their own development of mental illnesses. Top amongst these experiences were the emergence of depression, anxiety, and suicidality, per participant self-reporting. In addition, two participants gave clear descriptions of PTSD symptomology, including dissociation, panic, and flashbacks, with Hazel writing:

> I used to have frequent spells of dissociation and flashbacks regarding a period in my life when I tried to change my sexual orientation... **I used to become extremely disoriented, not know the date or my location, cry without noticing, and occasionally stop forming new memories**.

In this, a significant portion of participants reporting the effects of ACEs before their college entrance noted struggling with mental illness of some form. In college, these struggles continued, though participants acknowledged a range of support mechanisms they utilized to cope with ACE-related mental illnesses that were enabled by their new environment (discussed later).

Social development stagnation. The last major theme, reported by three participants, is termed Social Development Stagnation (SDS). Parents who exercised too much control over

their children inspired fears of independence, and prompted concerns about independence being impossible, while more negligent parenting resulted in children reporting social and emotional isolation. Nevaeh describes this experience, writing:

> Being raised with uncompassionate parents **made me into a pretty bitter and non understanding person**. I guess since I was treated with not much understanding or acceptance of my downfalls **I cannot be compassionate** for people I meet. Coming to college made this obvious. I have had the same group of friends for my entire life and **making new friends is way more difficult** than I expected.

This stagnation and isolation is perhaps one of the most significant observations, as the three participants who reported social development stagnation had among the lowest scores of college adjustment. With social support having been found to be one of the most significant elements of college adjustment, the experience of this isolation and stagnation can be particularly damaging to college adjustment and future social success.

Healing before college. ***Social support and adaptation.*** However, it is important to note that participants did not exclusively report negative experiences with their adversities before college. Rather, participants–some of whom also reported negative effects–showcased how they were able to adapt and overcome adversity during their high school years in their narrative responses. For those reporting experiences of adaptation as separate from support systems, Genesis captures this experience well:

> In high school, I tried to skew his incarceration as a positive thing. It made me realize that I cannot fall back on my father for support, and that I would have to become independent in both my academic ventures and

> home life (taking care of 3 siblings while my mother was at work). **Instead of slacking off** in my studies like I did prior to the event, **I realized I needed to work hard and succeed** to support the family.

In this excerpt, Genesis demonstrates her concerted efforts to double down and assume a position of responsibility within her family. As a result, she reflects on her adversity as enabling her hard-working diligence.

Several participants echo this feeling of working harder to overcome adversity, while also discussing this process in the context of larger community support. Within the participants who discussed adaptation and support systems, a few individuals highlighted ways in which support from friends or community members assisted their growth. The first of these, support from friends, is captured well by Grace, writing:

> As soon as my father left, **family friends surrounded my mom with groceries, chidcare [sic] help, and trees and gifts** for me for Christmas. **A couple from my church became teachers and mentors for me** as a tween and teen, giving me extra support on service trips around New England, vicariously teaching me how to be a kind, civic minded mid-upper class young person (and women's college student!), and encouraging me to dream.

The second, support from community members, is well-represented by Eliana:

> For many years I saw my going back and forth between houses, the varying tension between my parents, and how my father behaved as a result of his untreated mental illness as normal. It was over time, in **discussion with peers** and their family lives, **reading about experiences**

> **of others** on the internet, and **comparing my father's behavior [sic]** to other fathers I knew, **that led me to view my experiences as abnormal**, and to understand that they have affected me.

Regardless of form, though, for most participants the existence of some sort of community social support in childhood helped mitigate the effects of their childhood adversities. In addition, later instances of this community social support helped participants reflect on their own experiences and may have contributed to the beginnings of posttraumatic growth before college. In this way, participants echoed the belief that community support is one of the key resilience factors for children experiencing adversity.

Parental sacrifice. Beyond just community support, though, parents and parental sacrifices were featured heavily in narratives about mitigating the effects of previous Adverse Childhood Experiences. These took the forms of both financial and emotional sacrifices, with four participants reporting financial sacrifices like cutting corners on certain expenses to fund a child's desires (Grace) and emotional sacrifices like admitting wrongdoing (Anna), uprooting the nuclear family to move to a neighborhood with more opportunities and less violence (Grace), or defending one's children from a partner's violent outburst (Brielle). In noting these sacrifices, participants seemed to acknowledge their parents' actions as part of a struggle to support their children (themself), and most included a statement of appreciation for this form of sacrifice.

ACE as a means to success. Thus, the predominant discussion of adversity before college involved either the effects of ACEs or ways in which these effects were mitigated. However, it is notable that a few participants reflected on how they were able to transform their childhood adversity into a benefit–or use Adverse Childhood Experiences to achieve success and further themselves. This differs from adaptation (discussed earlier), as participants who

mentioned using their adversity as a means for success discussed it as a negative effect that they learned to live around, rather than those who described adversity as a means for success which emphasized their experiences as a negative occurrence which they were able to reframe as empowerment. Serenity captures this experience, writing:

> For the longest time I was so angry that I was chinese because of all this bullying, but in high school I learned to use it as one of my strengths. I knew of only two other asians in my high school, and there was 2 black kids, and that was literally it. **I learned to use my minority status as a way to be empowered, to be different.**

Growth over time. These methods of healing, through adaptation, social support, and parental sacrifices, both mitigated the effects of Adverse Childhood Experiences and bolstered the healing process. Several participants acknowledge this, with Aubrey reflecting: "I have always known that her [my mother's] behavior was wrong." Whether through comparison to friends' lives, or an outreach from community, seven participants were able to begin the healing and posttraumatic growth process before entering college - a journey that many note feels more like growth over time than an instantaneous switch from strife to wellbeing. That said, even for participants who indicated coming to an emergent understanding before entering college, all but one expressed continuing to grow in understanding and reflection from experiences during the college transition. The next section discusses the ways in which adversity arose in participants' college experiences, and how they tapped into college supports and community structures to address their adversity in new ways.

Dealing with Past Adversity at College

College promoting reflection. Of the 17 participants who submitted narrative responses, 16 individuals acknowledged the ways in which their experience at college promoted reflection on their Adverse Childhood Experiences. There were four main points highlighted in participant responses: distance from adverse childhood experience and those related to it, increased understanding of situational circumstances, increased access to therapeutic treatment options, and the existence of a social support network that provides friendship and acceptance.

Distance. Distance, and the space to reflect on childhood adversity separate from the situations in which it occurred, was the most salient theme for those reporting benefits from college, with most participants reporting that this factor enabled their posttraumatic growth in college. When discussing how distance enabled reflection, Lucy wrote:

> I was **able to think about my experiences in a different environment and realize that I could move on**… At college, I was able to socially adjust and feel that I've been able to move on even more from ACEs.

Thus, it seems that even for those who reported beginning the process of coming to terms with and drawing meaning from previous Adverse Childhood Experiences, the space and autonomy granted to them by attending a residential college promoted further reflection on their adversities and in many cases led to subsequent posttraumatic growth.

Increased understanding. In addition to distance, many respondents emphasized that college had provided them increased understanding through recognition of previous abuses and subsequent self-reflective exploration either within the self or with friends. For most participants, this increased understanding was strongly related to a subsequent lessening of ill-will toward parents, as Brielle reflects:

> I ultimately **realized that** [my self-blame and guilt for sadness] didn't matter, **I could feel what I felt and not feel guilty about it**… **I realized that internalizing all of my unhappiness wasn't required**, I could feel things openly. That was my right no matter what she [my mother] tried to tell me. **I also realized that she [my mother] wasn't necessarily doing these things with malicious intent**.

The forgiveness of parental wrongdoing highlighted by six participants in their responses is strongly indicative of a broader healing process which relates to posttraumatic growth and narrative reconstruction.

Access to treatment. However, participants were clear to emphasize that they had not achieved such progress on their own. A few participants highlighted that their healing was enabled through treatments which were newly accessible to them. Of these, a couple participants reported pharmacological intervention for mental illness to work through their traumas, while another three discussed undergoing healing and resolution process in conjunction with a psychotherapist or campus counselor.

Social support network. Several participants spoke to the importance that social support from friends on campus played in their posttraumatic growth and healing processes. One emphasized that the broader community accepted their identities significantly more than they had experienced during their childhood. Another, Athena, highlighted healing that occurred while being able to dialogue and seek support or advice from close friends:

> ...**my friends at college are very supportive**; they share their familial experience with me and **listen to my complaints** about my parents. Their

> intimate relationship with their parents made me reflect on my relationship with my parents.

A couple participants emphasized the importance of both broad acceptance of the campus community, as well as focused healing which occurred within the context of supportive friendships. In sum, participants detailed that college facilitated their healing process by providing space for learning, self-reflection, and understanding while promoting interpersonal connections which were significantly more supportive than the ones they had experienced in childhood and expanding opportunities to seek treatment.

College struggles. This is not to say that struggles at college did not occur - eight participants reported continuing to struggle to cope with their adverse childhood experience while at college in a variety of ways. Several reported fears about peers' reactions to their disclosures or maladaptive behaviors, experiencing guilt from leaving families and communities, and struggling to overcome prevalent classism or racism at college.

Fearing peer reaction. The most prevalent theme, fear of peer reactions, was divided almost evenly across two categories: maladaptive behaviors and fear of discussing prior trauma. In the first category, Eliana reflects:

> Certain aspects of my childhood do unfortunately still affect me at college, primarily in social interactions, as **some behaviours and responses I often saw and experienced as a child are now "okay" in my brain, even when I know that they are actually not,** and typically hurt the feelings of others.

This awareness of maladaptive behaviors as being harmful to collegiate peers was echoed by a few other respondents. However, most of those reporting fear of peer reactions fell into a second

category - one of silence emerging from shame or discomfort surrounding discussing one's Adverse Childhood Experiences. As Genesis explains:

> After hiding my father's incarceration from everyone I knew for five years, it made it hard to open up to people and make me feel insecure about myself, causing my social anxiety. Now in college, **I have no friends, because I am too scared to interact with others due to judgment.**

This is echoed in Nevaeh's explanation of difficulties making friends at college:

> I don't talk about my feelings to anyone and that seems to be what everyone wants to hear but **I am not comfortable discussing them**.

Thus, while the experience of campus acceptance and development of an expansive social support were critical to the healing process for several participants mentioned above, this selection of narratives highlights that those who enter college contending with the effects of Adverse Childhood Experiences may feel that there are too many barriers to developing such a support network.

Guilt over leaving. Participants reported feeling guilt over leaving behind community or family members. For those with younger siblings, there was a sense of deep shame associated with leaving them to the hands of abusive parents. A participant reflected on the difficulties of balancing self-blame for such actions with the need for self-improvement and sanctuary offered by herself college environment, but was not able to decisively declare herself guilt-free. Another participant reflected on guilt as it related to class - having just enough connection to be afforded a place at college and having to leave behind her high school friends who had just barely missed the opportunity. While these participants acknowledged their privilege in accessing an escape

from previous adversity, they continued to harbor guilt for those they felt they had left behind to continue suffering in their absence.

Discrimination. Once at college, another set of struggles become incredibly apparent: classism and racism within the campus community. Regarding classism, Grace reflected, "Now that I am at college, I think about my past and the identities it has given me in ways that I was able to ignore before." For a few individuals, identities that were once merely part of life (decreased salience due to the shared experience with their community) were suddenly incredibly salient at college. Grace expands this concept, writing:

> I grew up with the standard for "fun" being cooking a meal, hiking, wandering around stores, or watching YouTube. Here, I've noticed upper-class people party a lot (a luxury), go to concerts, and travel places on breaks. They talk about pop culture (in its special, Western MA brand!) and **don't always have lots of "real world" knowledge and perspective**. Even the fashion trends reflect money. I noticed these things the most first semester, when **I was overwhelmed by the social scene and having a hard time finding a place.**

This social rift and lack of concerted understanding from peers creates a social rift that respondents reported produced frustration with "entitlement" that allowed their peers to be deeply concerned with political correctness and specific food items while never having a space to voice their own worries with bills, scholarships, and jobs. Fortunately, the participants who experienced only classist discrimination reported being able to overcome this social rift by seeking out members of similar backgrounds (fellow low income and first generation students).

Racial discrimination was reported by a few participants, with one who prided herself on being able to laugh it off in a series of jokes and prioritize a decrease in bullying overall. On the other hand, the interaction of gender, racial, and class discriminations within the college setting was much more difficult to encounter and overcome. Elli reflects that the experience of broad discrimination becomes all-consuming in their college environment:

> Where before I did not **feel responsibility of my entire people on my shoulders**, now I do. I feel **guilt sometimes for leaving my sisters alone with my abusive parents**, feel guilty for leaving my community… **The isolation of being in the middle of nowhere, being brown and first gen and low income and nonbinary has me exhausted all the time** so I do not want to go anywhere… **My socializing skills are much lower now** because I don't have the opportunity to go out… **I have not grown in any sort of way here. I have deteriorated.**

This quote is of key importance, as Elli is the only member of the narrative analysis sample who both lacked a history of growth over time and reported experiencing absolutely no benefits in coping with past adversity while at college. Rather, as they explain, the acute experience of social isolation has removed their ability to seek any and all social support. They include several recommendations in their reflection, however, about ways in which the college could support their healing process more: increased accessibility to therapists of color and more free options to leave the "cult-like" campus.

College reframing. ***Self-acceptance.*** Most respondents who reported a college-inspired narrative reframing reported this being an experience of self-acceptance. For some participants, like Mila, this self-acceptance was a journey of radical personal transformation which involved

learning their identities and successfully asserting these identities to parents (or others who inflicted abuse). Others, like Katherine, reflect on a more internalized form of self-acceptance, writing:

> I have grown to analyze myself more clearly as a result of these events. **I am more loving of myself**, but I am more sensitive to maintaining my character as I want it to be portrayed.

Indeed, for almost all the participants reporting self-acceptance, the alleviation of self-blame for their Adverse Childhood Experiences and subsequent capacity to be more loving and forgiving of themself was one of the most powerful reframing experiences to have emerged from posttraumatic growth at college.

Increased confidence and control. This newfound self-acceptance often came with increased confidence in their abilities, and increased sense of control of their surroundings - or, an increased sense of self-efficacy. Several participants reported sharing this experience, as well as its effects on their reframing of their Adverse Childhood Experiences. Lucy captures this phenomenon, asserting:

> **I have more confidence in my ability to move on** and have more hope that things will get better as time goes on, and that **I can confront triggers of my trauma more readily**. I don't think I view my ACEs differently, but I do think that I approach them differently.

Time given maturity. For many participants, though, this experience of posttraumatic growth in college was much more nebulous, with emerging as part of a more natural-feeling process of coming into experientially gained wisdom which Mila termed "Time Given Maturity". Most of these participants reported that this new time given maturity manifested as a

new set of life skills, as well as the ability to actively practice life skills within the college environment. Aubrey describes this sense of self-growth and active practice of life skills, writing:

> In terms of daily functioning, **I am attempting every day to have more empathy and patience with people**, which were two traits my mother never expressed. **I know how to guage [sic] myself** as to when I am getting frustrated and in college **I have been actively trying to be kind and empathetic** to those I interact with.

For a few participants, this sense of time given maturity inspired a sense of increased peace of mind, both as a result of increased emotional stability and a new ability to reflect on previous childhood adversity without internalizing the blame for those experiences. Paisley summarizes the multifaceted experience of gaining peace of mind, writing:

> Since arriving at college, **I have been in a more emotionally stable state**. With this stability, comes a **great deal of clarity of myself, my surrounding, and the others who surround me.** I am able to not look at my parents as just heartless assholes, but see how ill they are, see the causes and underworking that causes them to be abusive and toxic. While you are in a terrible and toxic situation, you are left to respond immediately to the pain inflicted upon you in order to quickly defend yourself. **At college I am not living in fear like an animal.** I do not have the constant "flight or fight" state of mind in my everyday life. **I can see what was wrong and how it was wrong, rather than just reacting**

> **instantly and just trying to survive. I have been able to humanize my parents a little bit, and it brings me piece [sic] of mind.**

Additionally, a few participants reported gaining a sense of hope for the future as a result of posttraumatic growth experiences during college. This is rooted in experiences of peace of mind and increased self-efficacy, and may be the final step of coming to terms with childhood trauma. Hazel reflects on her significant decreases in previously very intrusive PTSD symptomology, celebrating:

> I still have triggers here, but they only make me feel sad and flighty. I've had no blank spots [dissociation-related memory loss] here, except on the first night of orientation. I'm also triggered by fewer things. **I feel happy here. College has been tremendous in my recovery. I no longer feel as if I deserved the things that happened to me, and I do not think about them constantly. I am able to function here in ways that I couldn't have imagined back home.** In high school, I wouldn't have said that I never felt happy, but **coming here completely changed my definition of what happiness means**. I feel content almost every day, and when I don't, I recover quickly. I was hoping these changes were permanent, but when I returned home for winter break, I immediately regressed. I was not able to cope with the toxic environment much more than I could in high school, and in addition to my symptoms returning, (I was disassociated [sic] for about a week), I felt enraged that I finally had a place where I was safe and happy but wasn't allowed to be there.

Discussion

Due to their investment in student success both during education and beyond, colleges must be broadly interested in factors that contribute to student adjustment, adaptation, learning, and future growth. Additionally, the period which traditionally-aged college students attend undergraduate institutions tends to fall during a period wherein the physiological and neural developmental abnormalities associated with child trauma are still addressable–as neural networks continue growing and refining themselves until age 25 (Arain et al., 2013). This situates colleges with undergraduate populations in a place where they are uniquely able to help students grow from their Adverse Childhood Experiences, while also making it in their interest to do so. Unfortunately, despite these moral and financial imperatives for colleges to address ACEs in their student bodies, there has been relatively little studied about the various ways in which colleges can mitigate the effects of prior traumatic experiences for current students or promote survivors' success.

To add to the existing literature, the current study investigated the effects of a Gender Inclusive Women's College environment on posttraumatic outcomes (adjustment, PTG, and growth narratives) for survivors of Adverse Childhood Experiences. In a sample of 103 first year students (Class of 2022) at Mount Holyoke College collected during the Spring of 2019, 82.5% of students reported at least one major childhood trauma before entering college, and most reported at least three major childhood adversities. These Adverse Childhood Experiences included physical abuse, physical neglect, emotional abuse, emotional neglect, sexual abuse, household substance abuse, incarceration of a family member, household domestic violence, witnessing violence directly, neighborhood insecurity, bullying, discrimination, and being in foster care. This is within the typical range for college students, as previous studies reported a

range of between 73-86% of participants having at least one major life trauma using an expanded definition of traumatic experiences beyond the standard 10 ACEs (Storr, Schaeffer, Petras, Ialongo, & Breslau, 2009; Fraizer et al., 2009; Shuwiekh, Kira, & Ashby, 2018; Calmes et al., 2013; Arnekrans et al., 2018). Broadly, the results of this study can be interpreted to mean that the experience of childhood adversity negatively affects college adjustment and performance but can be mitigated by successfully engaging with a supportive friend network. Seventeen of the study's participants provided narrative responses; analysis of these found that other factors contributing to the relationship between ACEs, college adjustment, and posttraumatic growth are the benefits of distance/independence from abuse situation, increased understanding and self-reflections, and newfound access to treatments.

The College Adjustment Phenomenon

When people reflect on their college experiences, they often highlight the interactions that defined their journeys–specifically those with peers, and to a lesser extent those with professors or staff. Friends, thus, are a critical part of the college experience, as memories and friendships outlast the temporality of college education. Social supports, like these friends and faculty or staff connections, have previously been found to be one of the most important elements of resilience in college life (Granda, 2017; Mohr & Rosén, 2017; Hixenbaugh, Dewart, &Towell, 2012). It is not surprising, then, that the present study found participants' connections to their campus community were incredibly important for college adjustment.

Interestingly, this phenomenon was stronger among students of color (SOC) in comparison to white students. SOC reported increased posttraumatic growth (by 10.6 points) despite not having reported significantly more Adverse Childhood Experiences than their white peers ($p = 0.40$). This may result from a community support mechanism stemming from the

experience of racial marginalization and the intergenerational trauma associated with experiencing discrimination. For a community-level resilience like this to occur across a population, the resilience is most likely based in the community or common identity (McCrea et al., 2019; Museus, Sariñana, & Ryan, 2015; Zubernis & Snyder, 2007). Another idea is that microaggressions (and other forms of discrimination) could be considered a Type II trauma, the ones most likely to promote posttraumatic growth (Laufer & Solomon, 2006). This would make sense, as those who encounter microaggressions often do so over long periods of time, but within supportive communities that actively offer ongoing social-emotional support to the victim through a set of supportive, caring adults or other resilience factors. Thus, the learned coping tools, finding pride in one's identity, and associated growth gained in response to widespread discrimination would lead to the development of more productive growth mechanisms for other forms of trauma and Adverse Childhood Experiences, and therefore increase an individual's posttraumatic growth potential. Both hypotheses (that of community-based resilience for SOC and that of microaggressions being a Type II trauma) emphasize the importance of having access to a supportive community to foster a community member's ability to be resilient, which may be an underlying factor influencing the increased PTG reported by SOC without a corresponding increase in reported ACEs.

In the regression model relating Adverse Childhood Experiences and various social supports to college adjustment, emotional abuse and sexual abuse were the primary contributors to the model. These factors independently explained 3.2% (emotional) and 4.6% (sexual) of the variance in the overall regression model. This is unsurprising, as a significant portion of research on childhood trauma targets sexual abuse, physical abuse, and emotional abuse/neglect (Duncan, 2000; Goldstein et al., 2010; Lev-Wiesel et al., 2005; Walsh et al., 2007). With this

theme being widely represented in existing literature on childhood trauma and its relationship to college, it is worth investigating the ways in which these specific types of abuse play into college adjustment and subsequent success. Participants who discussed emotional abuse described a narrative of how being (emotionally) torn down by their parents set a mental schema that devalued their own thoughts and needs. In college, many reflected that this schema made them fearful of peer judgement and rejection or caused other interpersonal connection difficulties. These created a sense of unbelonging in the college setting.

All of these set up barriers to social connections, which is particularly concerning considering previous findings that diminished social support and college adjustment negatively affect individual academic performance (Sandberg & Lynn, 1992), and current findings of a weak negative correlation between childhood adversity and college GPA. This decrease in student success in relation to previous Adverse Childhood Experiences may relate to the tendency of academia to silence survivors of assault (Wagner & Magnusson, 2005), or other factors associated with the college adjustment period. Another factor that may hinder student adjustment was the experience of guilt that accompanied leaving traumatic family and community environments; this may be a result of the increased cognitive load, as the stressors of constantly worrying about one's loved ones inhibit both academic success (Chen & Chang, 2009) and growth from past trauma.

Regardless of underlying reason, the important finding here is that students who enter college with a history of childhood adversity have likely psychologically internalized their abuse schemas and self-blame as models of relationships (Hooper, 2003). These may in turn lead to feelings of shame or defectiveness in addition to preexisting maladaptive coping mechanisms (Wright, Crawford, & Del Castillo, 2009). Without social support networks to assist with the

emotional processing of previous traumatic experiences, students may become trapped in a process of fear, response, and avoidance that worsens existing mental illnesses and applies more strain to social connections (Foa & Kozak, 1986). For many, coming to college was a salient theme in their growth narratives as this transition disrupted the cycle of self-blame and internalization by allowing them to realize that they were not solely responsible for their abuse.

In contrast, participants who discussed sexual abuse reflected the common tropes of sexual abuse tactics: as 8 of 10 sexual assaults of a child are committed by someone known to the child, the abuser often emotionally manipulates the victim into silence by convincing them that their opinions or experiences are insignificant (United States Department of Justice). As a result, participants who reflected on a history of sexual abuse reported intense shame and self-blame for their experiences, as well as an incredible amount of guilt for even labeling their experiences as sexual abuse. In participant's narratives, trauma resulting from sexual abuse functioned similarly to that from emotional abuse, but included the additional element of PTSD symptomology (including dissociation, flashbacks, and panic attacks), all of which have the potential to decrease ability to form interpersonal connections and introduced additional obstacles to studying (Pereira et al., 2018; Anders, Frazier, & Shallcross, 2012). Many of these participants reflected that coming to college disrupted this cycle by minimizing the influence an abuser had to continue perpetuating this harmful mentality and introducing new social supports that allowed them to disclose their histories and dispel the self-blame. This release of self-blame and newfound value for their own experiences and opinions, in addition to a developing ability to communicate assertively, were critical for their healing narratives.

However, the question still stands: how were social connections with friends, specifically, able to explain 11.6% of the variance in the regression model relating ACEs to college

adjustment? For participants who discussed either emotional or sexual abuse (or both), friendships were integral in that they served as supportive listeners, gave advice on social situations, and shared stories of their own families that enabled survivors to compare their own histories reflectively. Additionally, most participants reflected that the campus community was accepting of their identities and disclosures. However, it is important to note that this statement was not true for participants who struggled with classism and racism, two factors which likely hindered social connections for those attempting to grow with these sorts of past traumatic experiences. For those who were able to form supportive friendships on campus, these friends promoted a theme of self-acceptance and a release of self-blame for prior Adverse Childhood Experiences.

The degree to which the relationship between Adverse Childhood Experiences and college adjustment is mediated by social support (that is, the amount that having access to supportive friendships can interrupt the negative effects of ACEs on college adjustment) explains 98% of this relationship. Thus, the interpretation gained from these findings is that friends are the single largest factor promoting college adjustment for those who have experienced childhood adversity. As a result, being able to connect with a supportive friend network allows students to reach their full growth potential within college. However, the experiences of emotional and sexual abuse interrupt trust and relationship conceptualizations which are key to making friends in the first place; as such, emotional and sexual abuse can prevent a survivor from engaging with supportive friend networks, leading to low or absent college adjustment–and thus preventing them from benefiting from the college experience in relation to their past trauma. From this, it becomes evident that college administrators need to work to ensure that they are constructing an

academic environment which supports students in connecting with one another–or else they run the risk of letting previous adversity have significant negative effects on their student bodies.

The Mystery of Posttraumatic Growth

Interestingly, despite the significant relationship between Adverse Childhood Experiences, supportive friend networks, and college adjustment, there were no significant findings for either the regression or the mediation model relating these factors to posttraumatic growth. This null funding may relate to the growth in high school that some participants expressed solidly defined their relationship to their Adverse Childhood Experiences. Friends in high school, rather than friends in college, then, may be more important when examining posttraumatic growth in this context, as most of the Adverse Childhood Experiences begin by age six (Flaherty et al., 2013). With such an early beginning, it is reasonable that reflection on one's experiences begins with friends in high school, with these serving the role of supportive listener, advice-giver, and life-reference point that many participants expressed was crucial to their growth process.

While this was certainly true for one participant in the narrative response, though, many others emphasized that growth they began in high school had transferred into their new college setting with them. As a result, it appears that the explanatory power of the model may not be limited by power or the nonexistence of posttraumatic growth in college, but rather that it is considering the wrong elements. This is exemplified by the mediation model relating ACEs to posttraumatic growth through social supports. Looking specifically at the mediation model, both the relationships between ACE score and experience of social support, and the experience of social support and posttraumatic growth were significant, yet neither the direct nor indirect effects of this model were significant. Thus, it can be inferred that there is some other factor

mediating the relationship between these items. Based on past research, some of these items could include the degree of campus or community acceptance, emotional support mechanisms, positive reframing, independence/empowerment, self-efficacy, and differentiation of self from past abuse in a manner that allows individuals to separate themselves from the emotional aspects of trauma (Mohr & Rosén, 2017; Dawson & Pooley 2013; Hooper, 2003).

It is particularly interesting to examine this absence with respect to the strong role social support plays in mediating the relationship between ACEs and college adjustment–as it would follow that a supportive friend network would be able to help individuals cope with more than just the stresses of everyday life. In this nuisance may lie the answer to why there were no significant findings relating to posttraumatic growth: while participants may have been starting to activate their nascent support networks to enable posttraumatic growth, these networks are still very new and may not yet be enacting long-term effects on traumas physiologically coded into an individual's body.

A Note on Intergenerational Trauma

Many participants reported experiencing a phenomenon referenced in the results section as the *Intergenerational Transmission of Trauma* by referencing their parents' experiences of abuse or other traumatic experiences. This term is not new and has two well-explored approaches: the social and the biological. First, in the social realm, the transmission of traumatic experiences and their effects across generations is made quite clear by current study participants: parents who were maltreated as children may develop damaged schemas about the nature of parenting which are never fully resolved in adolescence and young adulthood. As a result, their parenting styles involve maltreatment and even abuse of their children, causing a new generation of offspring to undergo traumatic experiences at the hands of their parents (Hooper, 2003).

Second, in the biological realm, research has found that the physiological effects of childhood trauma can become deeply embodied in ways that negatively affect them for decades. It is hypothesized that physical wellbeing is compromised by the experience of childhood trauma through the expression of certain immune proteins which increase physiological illness rates (Coelho, Viola, Walss, Brietzke, & Grassi, 2014). In addition, research has found that telomeres–markers at the end of a cells genome which indicates the level of genetic stability–play a key role in traumatic transmission (Price et al., 2013). Indeed, exposure to childhood trauma causes premature telomere decay through oxidative stress, the effects of which are nearly indistinguishable from natural telomere decay related to aging, yet cannot be repaired by telomerase, meaning that the experience of early or chronic stress likely shortens an individual's lifespan irreparably (Ridout, Khan, & Ridout, 2018). These effects can even be transmitted from parent to child, with maternal experience of childhood maltreatment resulting in significantly reduced gray matter, even when controlling for other experiential and demographic factors (Moog et al., 2018).

What's so Special About a Gender Inclusive Women's College?

As mentioned in the introduction, there are several benefits associated with choosing Mount Holyoke as a location for study. Notably, Mount Holyoke has the most gender inclusive admissions policy of any Gender Inclusive Women's College in the United States (Kett, 2015). This is reflective of the broader campus culture, which bases its sense of identity on a strong foundation of community bonds which may support posttraumatic growth uniquely in ways that other institutional settings do not or cannot. The students take pride in this sense of community, and consistently push for it to become more supportive. However, in the academic year (FY 18-19) that this study was administered, this community pride may not have been as supportive as it

was in years prior, as the students were actively contending with several Title IX and sexual assault scandals across the year which would occupy cognitive and emotional energy that would otherwise be dedicated to supporting their peers' growth. First year students, having not experienced the campus before this, could have been more strongly affected by this stark shift in climate than other class years or less strongly affected by the same phenomenon as they lacked a comparison point for campus culture in prior years.

In general, participants indicated strong feelings of belongingness within the college community, highlighted its accepting and supportive environment, and discussed several factors related to their college adjustment and posttraumatic growth processes which stemmed from this inclusive campus environment. Interestingly, participants reporting higher rates of Adverse Childhood Experiences also reported average rates of both social support (high-average) and posttraumatic growth (low-average). No statement can be made on college adjustment comparability as the measure is too new. The slightly high rates of trauma may either relate to a process of self-selecting (wherein individuals who have experienced abuse or discrimination actively seek out a community where they perceive lessened risk of repeat trauma) or the fact that the sample was drawn from an institution where everyone identifies with some sort of marginalized gender identity which is subject to increased victimization (including cisgender women, transgender women, transgender men, and nonbinary folk). That said, higher rates of trauma–which could be considered more psychologically damaging as the risks for long-term harms increase with each ACE reported–are not reflected in posttraumatic growth scores, which remain consistent with other recent studies.

This community, formed by voices that can be suppressed by larger co-educational institutions, thereby frees itself from the cultural contexts which silence survivors' healing

processes. As a result, it was expected that some increased degree of peer social support – particularly around the subject of posttraumatic healing – would exist in any isolated feminist or non-inclusive Women's College environment as well. However, what makes the Mount Holyoke campus from these other environments unique is its radical inclusivity policy, which reflects into the broader campus culture. In other words, by choosing to emphasize gender, racial, and other forms of inclusivity as a core community value, the College establishes its community in a manner that facilitates survivor growth and development through more extreme support mechanisms than would be offered in a more subjective feminist space or traditional Women's College. This cultural tendency toward inclusivity and experiential openness clearly facilitates an increased level of peer social support within the Mount Holyoke community. And, as peer social support has been found to be a strong contributor to adjustment, belongingness, and posttraumatic growth, it seems reasonable to infer that the findings indicate the superior standing a Gender Inclusive Women's College community has when facilitating survivors' healing by providing both social support and a space to hold discourse around subjects usually silenced in co-educational institutions (Miller & Servaty-Seib, 2016; Dawson & Pooley, 2013).

It is unfortunate that the sample did not contain enough participants of gender-diverse identities, even though it contained significantly more transgender-identifying participants than the national college population estimate. Had the sample included significantly more transgender-identifying participants, it seems likely that these students would have contributed to increased averages for ACE scores (due to their increased likelihood of encountering adversity), and decreased ratings for both posttraumatic growth (fewer community supports in high school) and overall social support (likely from a decrease in family support); the findings are less reliably generalizable for college adjustment, though it is presumable that this would stay

relatively similar as the friend support in college and the small sample's college adjustment scores appear to be relatively similar to the larger sample). If the sample had drawn from transgender-identifying students at a later point in their college careers, it is likely that posttraumatic growth scores would be higher than the average population, as the newfound supports of a Gender Inclusive space would be allowing these individuals to take advantage of posttraumatic healing opportunities in a way that was previously closed to them. However, each of these statements is speculation based on a limited sample that may not be representative of the gender-diverse community at Mount Holyoke and should be interpreted as such.

Implications for Colleges

Drawing on this knowledge of the difficulties that students with past trauma encounter when adjusting to college, as well as its detrimental effects for academic success within the current sample, the findings of this study are incredibly important to the field of student success as they shed light on the adjustment period and factors which enable this transition. With this understanding that Adverse Childhood Experiences can lead to lasting physiological effects, it becomes even more clear that, while colleges may not be able to single-handedly resolve an individual's traumatic history, they serve as a key intervention point for traumatic mechanisms and healing. Thus, it is incredibly important that colleges strive to establish structures which facilitate posttraumatic growth for students during their time on campus to assist students in repairing the long-term baggage resulting with their experiences of childhood trauma.

In fact, one participant noted that college has played a "tremendous" role in her growth. A fall admit, she describes arriving at college and undergoing an incredible healing process; unfortunately, this was cut short when she left campus for winter break. Upon arriving at home, she immediately regressed, and finds the idea of doing so again in the summer incredibly

distressing. As this story demonstrates, the healing process takes place over time. Almost all students who are struggling to heal and make meaning from their adverse childhood during in their first year of college is note that this growth is by no means complete as they move into their sophomore year. Rather, this pattern of growth continues over, meaning that the social supports instituted to promote posttraumatic growth in first year students need to be extended in ways that reach upper class students as well. Otherwise, students may begin a healing process in their first year, and then regress across the next several years as they struggle to mediate the stresses of college, posttraumatic growth, and meaning making.

In their commitment to student success, and in pursuit of a creating a holistically-well student body who can enter the professional world without faltering, the imperative for colleges to foster posttraumatic healing in their programming becomes crystal clear. However, the pathway forward may not be as evident. The present study strongly supports the need for colleges to help students organically develop strong social connections with their peers through events centered on topics outside academia. However, even the model for college adjustment only explains 36.1% of total variance using trauma and social support as predictors of traumatic growth. Participants identified several factors in their narrative responses that present interesting ideas for student programming and development strategies. These include: increased and inexpensive access to therapists of color, more free options to leave the campus, differentiation of self that comes with living at a residential college, the role that communities of color play in the growth narratives of SOC (with possible mentorship opportunities), and ways in which college facilitates understanding and allows the practice of emergent life skills among peers.

It is worth noting that one participant emphasized a lack of access to the tools that others found unspeakably helpful in their growth process due to racism in the community. They

highlighted how they felt like they were being asked to represent their entire ethnic identity at all points in time, and this increased pressure made them disinclined to seek out social connections. Another participant spoke to this subversive sort of racism, noting that her experiences at college revolved around not fitting in with her identity group enough–and being unable to find a social identity group that fit well as a result. Instead, she reported enduring harassment and degradation from her friends about how she looked like a student of color but was just white experientially. From these stories, we are reminded that, while many participants are benefiting from the solid foundation which the college has constructed to promote posttraumatic growth for its first year students, it is important to acknowledge that more work must be done to continually build an inclusive and supportive community.

Limitations

While there were several important findings which have worked toward uncovering the relationships between Adverse Childhood Experiences, supportive friends, college adjustment, and posttraumatic growth, the present study does have its limitations. Importantly, running a regression with 16 independent predictors among 85 participants may have contributed to issues of power within the sample. Beyond this, the sample is only moderately representative of campus racial demographics; Mount Holyoke does not publicly publish gender identity demographics of its students, but when comparing the sample to the American College Health Assessment 2018 findings the number of participants who identified with the transgender umbrella was significantly higher in this sample than the general student population rate of 1.6% (American College Health Association, 2018). No data were collected asking students to indicate whether they were domestic or international, which may have skewed the findings for SOC to reflect the more affluent status of international students (as they comprise approximately

33% of the campus and an even larger portion of the SOC). Not being able to differentiate between individuals with collectivist values and those with individualist values may have skewed results, as there are cultural differences in emotional separation from traumatic experiences between the two framings (Hooper, 2003).

Regarding the quantity for narrative analysis, there were two participants who wrote brief (three to five sentence) narrative responses, which detracted from the richness of their stories of posttraumatic growth on the college campus. Finally, it should be noted that, as many participants reflected, posttraumatic growth occurs over time; as this was not a longitudinal study (which was outside the scope of feasibility for the researcher), there is a change that no posttraumatic growth was detected in the sample because it has not yet had time to come to fruition. This extends to the mediation analyses performed as well, as this sort of test implies an underlying causal relationship but was run on cross-sectional, non-experimental data and thus may not accurately represent the relationship between these items as they exist over time.

Future Studies

Based on these limitations, several recommendations for future study emerge. Most notably, it would be beneficial to run a similar project again as a longitudinal measurement of PTGI scores between students in their first semester and the same students in their final semester; doing so would likely change the results of the posttraumatic growth regression and mediation models to more accurately reflect the ways in which social supports enable healing and growth over time. Unfortunately, this sort of longitudinal research was outside the scope of a senior thesis. However, another fascinating variation that could fall within the constraints of a project with shorter duration would be to conduct this study among college seniors; doing so would likely better capture ways that those in their final year of college conceptualize of their

growth throughout college in ways that may not be as apparent to first year students who are still actively navigating this transition and are therefore unable to fully take advantage of the social supports offered by the college environment. Additionally, it would be valuable to run this study with a larger sample of gender diverse students to fully capture the effects that a Gender Inclusive Women's College environment has on these marginalized identities.

In terms of the measures and questionnaires, several recommendations emerge as well. While each of the measures were statistically reliable, the precision with which they were able to fully construct an image of college adjustment and posttraumatic growth for college first years is more questionable. As a result, it would be interesting for future researchers to consider available alternative measures, including the Childhood Trauma Questionnaire which is the measure typically paired with the PTGI (Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995), or even developing an accurate Resilience battery to measure resilience, adjustment, and growth with more direct relation to ACE research. Additionally, analysis of open-ended student responses indicates several areas where measures of other factors could possibly uncover more of the college-facilitated posttraumatic growth narrative. These include differentiation of self from the abuse, understanding of previous situations, the attainment and practice of new life skills, increased sense of self-efficacy or confidence and control, and accessibility to a diverse variety of treatment options. Such scales could include the Self-Efficacy for Personal Recovery Scale (Villagonzalo et al., 2018), the Resiliency Scale (Wilson et al., 2019), the Widener Emotional Learning Scale (Wang, Young, Wilhite, & Marczyk, 2011), the Barriers to Access to Care Scale (Clement et al., 2012), and a measure examining individual knowledge of childhood trauma and its effects (to fulfill the increased understanding that many participants reported). Another fascinating addition to knowledge would be a brief study comparing an individual's

Adverse Childhood Experiences score and college GPA both for first year and across their time at college (for all students, including those who withdraw) across women's colleges, co-educational private colleges, religiously-affiliated colleges, and large public institutions. This would allow direct conclusions to be drawn about the relationships between childhood trauma, educational institution structure, and subsequent personal growth.

For the narrative analysis, it would have been invaluable to be able to follow up with participants' statements and narratives, both to construct a more complete picture of trauma before college and to more fully explore the specific actions that friends or other social supports took that facilitate posttraumatic growth. A two-phased data collection design in subsequent mixed methods studies of a similar design would be ideal, as participants could complete the quantitative questionnaire and opt in to future research opportunities including an in-person interview. If this research were to be conducted by a college-affiliated researcher, it would be highly important for the primary investigator to consider the ways in which Title IX and mandated/responsible reporting could hinder both participant disclosures (honesty and validity) and would generally comprise the researcher-participant sense of confidentiality and address these potential drawbacks.

Conclusion

The current study investigated posttraumatic outcomes (adjustment, PTG, and growth narratives) for survivors of Adverse Childhood Experiences within a Gender Inclusive Women's College environment, as well as student perceived influences of such an environment on their growth narratives. Based on analysis of the results, findings indicate that Adverse Childhood Experiences affect most college students (82.5% in this sample) and are negatively related to

both first year GPA and college adjustment. Supportive friend networks seem incredibly important in mediating this relationship (explaining 98% of the relationship between ACEs and college adjustment), as they enable reflection and facilitate experience reframing by acting as supportive listeners, giving advice, and sharing personal stories within the context of a more broadly accepting campus. Additionally, participants reported that the college experience facilitated their posttraumatic growth by introducing distance/independence from the abuse situation and enabling them to seek a variety of treatments for their traumatic symptoms.

Unfortunately, when either the campus climate or an individual's prior trauma prevents them from forming these connections, students report significant struggles and stressors, and are often unable to grow within the college context. Thus, it is important for colleges to facilitate the processes of college adjustment, posttraumatic growth, and meaning making to ensure that all students can fully benefit from their college experiences. This becomes especially important when considering that, for traditional-aged college students, their undergraduate education is likely both the first (differentiation of self from abusive situations) and last (neuroplasticity begins declining after age 25) opportunity they will have to address the maladaptive coping mechanisms they may have developed as a result of their previous adversities. In their pursuit of enabling student success both within and beyond the institution walls, and considering the physiological and psychological effects of Adverse Childhood Experiences as well as the prevalence of the issue within collegiate populations, it follows that colleges are morally obligated to construct programs and tools which enable students to tap into their own resilience and that are available in the broader community.

As this research occurred at a single institution, it follows that recommendations should be made for Mount Holyoke College and generalized to other institutions of higher education

with care and consideration for each college's unique culture. Programmatically, a few approaches this specific institution could take include pursuing a more active stance against racial discrimination and institutionalized racism within the campus community (through educational programs like requiring all students to attend the Community Action Day), facilitating mentorship opportunities for students of color and low income or first generation students with professors who share similar identities (or supporting a student organization to do this while subsidizing the professors for their extra time and energy), and recruiting more therapists of color to join the free-of-charge Counseling Center while expanding the number of practitioners available to ensure that waitlists remain short.

The previous recommendations all serve to build campus supports available to students grappling with histories of trauma; however, none address the finding that social supports are one of the most significant factors that enable students to process and grow with their past adversities. Several findings within this study determined that the college needed to construct spaces, especially for first year students, to facilitate the development of organic social connections. The most effective place to implement this would be during Orientation, when few students know one another and have not yet begun the academic year. Playing into the first-year desire to forge a sense of community on campus by planning events that de-center academia and lecture-style introductions would allow first year students the space they need to build relationships that will support them throughout their college career. With this in mind, it would be advisable to include more time for students to develop their relationships organically (by spreading orientation across more days), including more programming in the additional orientation time that engages students in activities meant to promote fun or collaboration, and

introducing an element to institution-sponsored programming which focuses on building a student's sense of self-efficacy.

Additionally, it would be wise to expand the Be Well program to include facilitating social connections and relationship-building (skills) between students, establishing spaces where people can learn about and practice adaptive coping mechanisms and productive communication techniques, and continuing to broaden the forms of alternative therapies (meditation, yoga, mindfulness, and other practices which have been acknowledged as particularly effective methods of facilitating posttraumatic growth in adult survivors) offered on campus and the times at which they are offered. Importantly, all these factors take time to build toward in order to fully achieve any of the many levels of posttraumatic growth, and there are a multiplicity of ways which students could reach posttraumatic growth within college. This means that, while programs targeting the first year students are particularly useful in starting this cascade of growth, there should be an additional focus on designing programs to address the needs of all class years as a means of continually facilitating growth and healing throughout a student's college experience.

Final Reflection

I wish that I could say that I was startled by the prevalence of adversity on my campus; I was not. I wish that the struggles and triumphs of the college experience could be experienced separately from these childhood traumas, but they are inextricably linked. However, this is not meant to be a story of despair, but rather a plea for action and effects. Colleges must help students address their previous traumas to create a holistically successful individual, but there are a multitude of ways in which they can facilitate this healing process. Some of these methods are outlined in the previous pages, while others will emerge through dialogue and interaction with

the student body. Above all, it is important to remember that humans are a hardy species, and that our passion for self-improvement means that no one is lost. The freedom and kinship that develop within an individual's college experience provide a sense of hope for individuals harmed by their Adverse Childhood Experiences, and a necessary haven to grow from prior adversity. Together, the faculty, staff, student body, and institution can work toward healing the world one student at a time–we just need to take the first step.

Appendix A

Demographic Questionnaire

1. What is your class year?
    - 2019
    - 2020
    - 2021
    - 2022
    - Francis Perkins

2. Do you identify with the transgender umbrella? For the purposes of this research, the transgender umbrella can include gender fluid, gender queer, nonbinary, agender, transgender, those with a history of transition, and other gender diverse identities.
    - Yes
    - No

3. If yes, do you identify with any of the following labels (check box)?

FTM	MTF	Two Spirit	Trans	Man
Trans Masculine	Trans Feminine	Agender	Gender Fluid	Woman
Non Binary	Bigender	Gender Queer	You Don't Have an Option that Applies to Me	

4. Please indicate the racial and ethnic categories you identify with.
    - American Indian/Alaska Native/Native Hawaiian/Pacific Islander/Indigenous
    - Southeast Asian/East Asian
    - African American/Black
    - African
    - White/European
    - Hispanic/Latinx
    - Arabic/Middle Eastern
    - You don't have an option that applies to me… (tell us more about your identity in detail if you feel comfortable).

5. Please select your age range.
    - 18 - 24
    - 25 - 49
    - 50 +

6. What sort of education had your highest-educated parent or guardian completed at time of your birth?

- No schooling completed
- Nursery school to 8th grade
- Some high school, no diploma
- High school graduate, diploma or the equivalent (for example: GED)
- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree

7. What annual income bracket did your childhood household fall in to?
    - < $30,000
    - $30,000 - $49,999
    - $50,000 - $74,999
    - $75,000 - $99,999
    - $100,000 - $199,999
    - $200,000 - $399,999
    - > $400,000

8. How many people supported this income?
    - Numerical fill in the blank.

Appendix B

College Adjustment Questionnaire (O'Donnell et al., 2018)

1. I am succeeding academically.

1	2	3	4	5
Very Inaccurate				Very Accurate

All of the following items are scored as presented in Item 1. * Denotes reverse scoring.

2. I don't have as much of a social life as I would like.*
3. I feel that I am doing well emotionally since coming to college.
4. I am happy with my social life.
5. I am doing well in my classes.
6. I am happy with how things have been going in college.
7. I am happy with the grades I am earning in my classes.
8. I feel that I am emotionally falling apart in college.*
9. I have had a hard time making friends since coming to college.*
10. I am as socially engaged as I would like to be.
11. I have felt the need to seek emotional counseling since coming to college.*
12. I am meeting my academic goals.
13. I have performed poorly in my classes since coming to college.*
14. I am satisfied with my social relationships.

Appendix C

Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988)

1. There is a special person who is around when I am in need.

1	2	3	4	5	6	7
Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree

All of the following items are scored as presented in Item 1.

2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

Appendix D

Expanded ACE Survey (Cronholm et al., 2015)

1. While you were growing up how often did a parent, step-parent, or another adult living in your home swear at you, insult you, or put you down?

0	0	1
Never	Once	More than Once

2. While you were growing up how often did a parent, step-parent, or another adult living in your home act in a way that made you afraid that you would be physically hurt?

0	0	1
Never	Once	More than Once

3. While you were growing up did a parent, step-parent, or another adult living in your home push, grab, shove, or slap you?

0	0	1
Never	Once	More than Once

4. While you were growing up did a parent, step-parent, or another adult living in your home hit you so hard that you had marks or were injured?

0	1	1
Never	Once	More than Once

5. During the first 18 years of life, did an adult or older relative, family friend, or stranger who was at least five years older than yourself ever touch or fondle you in a sexual way or have you touch their body in a sexual way?

0	1
No	Yes

6. During the first 18 years of life, did an adult or older relative, family friend, or stranger who was at least five years older than yourself attempt to have or actually have any type of sexual intercourse, oral, anal, or vaginal with you?

0	1
No	Yes

7. There was someone in your life who helped you feel important or special.

1	1	0	0	0
Never True	Rarely True	Sometimes True	Often True	Very Often True

8. Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?

0	1
No	Yes

9. Your family sometimes cut the size of meals or skipped meals because there was not enough money in the budget for food.

0	0	0	1	1
Never True	Rarely True	Sometimes True	Often True	Very Often True

10. How often, if ever, did you see or hear in your home a parent, step parent, or another adult who was helping to raise you being slapped, kicked, punched, or beaten up?

0	0	1	1
Never	Once	A Few Times	Many Times

11. How often, if ever, did you see or hear in your home a parent, step parent, or another adult who was helping to raise you being hit or cut with an object, such as a stick, cane, bottle, club, knife or gun?

0	1	1	1
Never	Once	A Few Times	Many Times

12. Did you live with anyone who was a problem drinker or alcoholic?

0	1
No	Yes

13. Did you live with anyone who used illegal street drugs or who abused prescription medications?

0	1
No	Yes

14. While you were growing up, did you live with anyone who was depressed or mentally ill?

0	1
No	Yes

15. Did you live with anyone who was suicidal?

0	1
No	Yes

16. How often, if ever, did you see or hear someone being beaten up, stabbed, or shot in real life?

0	0	1	1

Never	Once	A Few Times	Many Times

17. While you were growing up, how often did you feel that you were treated badly or unfairly because of your race or ethnicity?

0	0	1	1	1
Never True	Rarely True	Sometimes True	Often True	Very Often True

18. While you were growing up, did you feel safe in your neighborhood?

1	1	0	0
None of the Time	Some of the Time	Most of the Time	All of the Time

19. While you were growing up, did you feel people in your neighborhood looked out for each other, stood up for each other, and could be trusted?

1	1	0	0
None of the Time	Some of the Time	Most of the Time	All of the Time

20. How often were you bullied by a peer or classmate?

0	0	1	1
None of the Time	Some of the Time	Most of the Time	All of the Time

21. Were you ever in foster care?

0	1
No	Yes

Appendix E

Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996)

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your crisis/adversity using the following scale.

1. I changed my priorities about what is important in life.

0	1	2	3	4	5
Did Not Experience	Very Small Degree	Small Degree	Moderate Degree	Great Degree	Very Great Degree

All of the following items are scored as presented in Item 1.

2. I have a greater appreciation for the value of my own life.
3. I developed new interests.
4. I have a greater feeling of self-reliance.
5. I have a better understanding of spiritual matters.
6. I more clearly see that I can count on people in times of trouble.
7. I established a new path for my life.
8. I have a greater sense of closeness with others.
9. I am more willing to express my emotions.
10. I know better that I can handle difficulties.
11. I am able to do better things with my life.
12. I am better able to accept the way things work out.
13. I can better appreciate each day.
14. New opportunities are available which wouldn't have been otherwise.
15. I have more compassion for others.
16. I put more effort into my relationships.
17. I am more likely to try to change things which need changing.
18. I have a stronger religious faith.
19. I discovered that I'm stronger than I thought I was.
20. I learned a great deal about how wonderful people are.
21. I better accept needing others.

Appendix F

Qualitative Prompt

In the previous survey, you marked that you have experienced at least one Adverse Childhood Experience. In this case, these can include experiences of any or multiple of the following before age 18: emotional abuse, physical abuse, sexual abuse, emotional neglect, or physical neglect perpetrated by a family member or relative; the presence of household domestic violence, household substance abuse, household mental illness, or incarceration of a household member; frequent neighborhood violence, discrimination, bullying, or time in foster care.

Sometimes people begin to understand their experiences of trauma in a different way once they've come to college, compared with when they were at home. We are interested in learning more about if you have experienced change in your understanding of childhood trauma, and if so, if there are any specific things that relate to that change for you. Please respond in at least two paragraphs. Your responses will be completely anonymous to protect your confidentiality; however, this means that we will *not* be able to follow up with you on your responses, so please explain anything that arises in as much detail as you are comfortable with.

- Has your college experience led you to view your Adverse Childhood Experiences differently than you previously have (i.e. before coming to college)?
    - If you do view them differently, please discuss how you conceptualize your experiences and their relationship to your life at the present moment in as much detail as you choose. What do you view differently from when you began college? What has facilitated this shift? What perceptions have remained consistent? This could include perceptions of guilt or responsibility, feelings or emotions related to the events, or other subjects.
    - If you do not view them differently, please discuss how you conceptualize your experiences and their relationship to your life at the present moment in as much detail as you choose. This could include perceptions of guilt or responsibility, feelings or emotions related to the events, or other subjects. Is there something that could have helped you process your experiences better while transitioning to college?
- Some survivors of trauma report increases in self-acceptance, autonomy, purpose in life, sense of mastery, or other forms of personal growth after a traumatic event.
    - Do you think that you've grown with how you conceptualize your experiences of trauma? If yes, please provide some examples in your response.
    - Do you think that you've grown with how your experiences of trauma affect your daily functioning since coming to college? If yes, please provide some examples in your response.

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