The Effects of Self-Compassion, Attachment-styles, and Intolerance of Uncertainty on Trauma Outcomes

by

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Abstract

Research shows that a complex life experience, such as trauma, will most likely be experienced in a person's life (Nelson, 2019). Experiences with trauma can have a lasting effect on all aspects of a person's life, and one area of significant concern is the parts unseen, the psychological impact (Sperry, 2016). For example, studies have found that increased adverse childhood experiences are linked to health concerns and chronic health conditions, such as heart disease and early death (Petruccelli et al., 2019). In addition, trauma outcomes can develop into psychopathological symptoms of PTSD (Jones & Cureton, 2014).

Counselors must understand the individual factors contributing to a person's trauma outcomes, specifically, psychosocial factors such as attachment, intolerance of uncertainty, and self-compassion. This quantitative research study investigated the effects of the psychosocial variables of self-compassion, attachment style, and intolerance of uncertainty on the relationship between early childhood adversity and adult psychopathology. Further, this study aimed to understand how the potential protective factor of self-compassion relates to the following factors: attachment style and Intolerance of Uncertainty. Results from this study indicated that psychosocial variables are significantly related to trauma psychopathology outcomes. Furthermore, there was a strong correlation between anxiety attachment and high levels of trauma psychopathology.

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COVID-19 Coronavirus disease of 2019

PCL-5 PTSD Checklist-5

RSQ Relational Styles Questionnaire

SCS Self-compassion Scale

Chapter 1

Introduction and Background of the Problem

Trauma is a worldwide issue (Benjet et al., 2016), with 70% of people in a study collecting data from people worldwide reporting a traumatic event, of which 30% were exposed to four or more events. While Benjet's et al. (2016) global study did not identify one vulnerable group, the study did reveal the five most common traumatic experiences. These included: witnessing death or serious injury, experiencing the unexpected death of a loved one, being mugged, experiencing a life-threatening automobile accident, and experiencing a life-threatening illness or injury. In recent research, it has been identified that psychosocial factors are a risk factor for cardiovascular disease (CVD) (Everson & Lewis, 2005; Sumner et al., 2023); further CVD has been linked to increased childhood adversity experiences (Sumner et al., 2023). There are high rates of childhood trauma, with 1.5 million verified cases by the National Center of Child Abuse and Neglect in the US alone (Hoppen & Chalder, 2018), yet even with extensive research, there is still a need to understand the underlying mechanisms that contribute to trauma outcomes.

A pioneer in child development, John Bowlby, with the help of Mary Ainsworth, contributed the hypothesis that children have internal working models that are defined by their experiences with an attachment figure. Bowlby's research was defined by exploring the psychological trauma of children who lost their parents or parental figure to war. The result of his, and later Ainsworth's (Ainsworth et al. 1978) work, was the development of attachment theory (Bowlby, 1969). The internal working model is a conceptual theory that makes up attachment research. This theory asserts that a person's internal working model helps them organize their relational interactions through thoughts, affects, and behaviors, which emerge

through the mother-infant relationship (Kurdek, 2002). Furthermore, the internal working models hold the models about self and others, which can be negative or positive. Researchers in the counseling mental health field have continued their work to examine the link between early relational attachments and the risk and protective factors associated with the different attachment styles, even within the context of a global pandemic (Castellini et al., 2022; Boroujerdi et al., 2019; Costa-Cordella et al., 2022).

A study conducted by Rauschenberg et al. (2017) found evidence that childhood trauma elevates stress sensitivity in adolescents and young adults. In addition, persistent dysregulation of the central nervous system contributes to prolonged experiences of trauma (Baldwin, 2013), and childhood diversity is well-established in the literature as a significant risk factor for developing psychopathology in adulthood (Felitti et al., 1998). Felitti et al.'s (1998) ground-breaking study on adverse childhood experiences as a pathway to health-related issues in adulthood paved the way for a further understanding of how early trauma impacts children's mental health. While Felitti et al. (1998) added the necessary empirical knowledge that increased the movement toward child and adolescent mental health, there is still no consensus and understanding of treatment for childhood experiences of trauma.

Since the onset of COVID-19 in March 2020, the world has been living in collective uncertainty. COVID-19 is a trauma experienced globally, nationally, and individually. This is an event that corresponded to levels of personal and professional uncertainty. The global pandemic forced those with no health concerns to suddenly have to constantly worry about and take extra precautions to ensure their health. The global pandemic led to millions of people dying prematurely, leaving behind partners, children, and communities, increased isolation, mandated lockdowns, uncertainty (Wang et al., 2022), national job loss (Gowayed et al., 2022), violence

and discrimination (Donnelly et al., 2022; Tracy et al., 2022; Schleimer et al., 2022), political unrest (Njoku, 2022), and mental health disparities (Newnham et al., 2022; Cote et al., 2022). While some individuals may not have contracted the virus, they may have experienced mental and emotional stress and anxiety over the past three years. Understanding the factors that may have corresponded to how individuals processed these levels of uncertainty is critical to helping others mediate or process similar experiences of loss and uncertainty. Related research has suggested that these variables may mediate one's response to trauma (Jative & Cerezo, 2014). This study explored these variables, specifically the personality traits of self-compassion and attachment style, concerning the level of trauma experienced. In addition, one of the significant aspects of this pandemic was that it was correlated with long periods of uncertainty in reference to response, outcomes, and risk (Deniz, 2021). Based on this, the current study examined the intolerance of uncertainty related to the level of trauma response. As noted, understanding how these factors impact a person's experience with trauma can be critical to effectively working with clients impacted by all forms of trauma. This can include consideration of how these variables contribute to trauma responses and recommendations for counseling interventions and training.

Trauma

Trauma is "an emotional response to a terrible event" (American Psychological Association (APA), n.d.). Further, it is defined as "any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings intense enough to have long-lasting negative effects on a person's attitudes, behavior, and other aspects of functioning." (American Psychological Association (APA), n.d.). Humans may initiate trauma or result from natural events like a global pandemic. Trauma takes a toll physically, emotionally, spiritually, and psychologically. The defining features of psychological trauma speak to the

individual's experience of the event and impact their ability to integrate the experience adaptively, effectively utilize coping skills, and can create avoidance behaviors and emotional responses such as fear. Individuals may also experience emotions, including helplessness and terror (Sperry, 2016).

Types of Traumatic Events

Traumatic events may be a direct or indirect experience. For example, a direct experience would include a person firsthand experiencing a threat, while an indirect threat would include seeing an event, such as a car crash, happen to another person (Szogi & Sullivan, 2018). Other considerations include the prolonged or short nature of the trauma, clinically deemed acute or chronic. Chronic trauma differs in that the onset is in childhood and is found to have more severe effects on a person's psychological wellness and functioning (Musazzi et al., 2017). Adverse childhood experiences (ACES) are found to be common and are linked to health concerns experienced as an adult (Oehme et al., 2019). The ACES scale measures a person's early exposure to adverse experiences, with an increased ACES score indicating higher health and socio-emotional risks later on in life (Petruccelli et al., 2019). Adverse experiences are categorized into three broad categories: abuse, neglect, and household dysfunction. *Abuse* can be further defined as physical, emotional, and sexual abuse. *Neglect* is further defined as physical and emotional, and household dysfunction is identified as substance abuse, mental illness, domestic violence, incarceration, and parental separation (Petruccelli et al., 2019).

Health concerns linked to ACEs

An increase in the experiences of ACEs is connected to a person's health outcomes (Petruccelli et al., 2019). In a meta-analysis conducted by Petruccelli et al. (2019), they found medical and psychosocial concerns related to ACE experiences. Medical concerns include

respiratory disease, sleep problems, diabetes, heart disease, gastrointestinal disease, somatic pain, hypertension, stroke, cancer, fracture, and memory impairment. Psychosocial concerns include tobacco use, alcohol problems, risky sexual behavior, depression, use of illicit drugs, obesity, behavior problems, psychological distress, suicidal ideation, low exercise, victim of violence, hallucinations, and panic or anxiety. Further, females and minority populations are more likely to experience an ACE qualifying event (Petruccelli, 2019).

Neurobiological Effects of Trauma

Experiences of trauma, whether acute or chronic, activate the body's stress response system, known as the hypothalamic-pituitary-adrenal (HPA) axis (Klaassens et al. 2007). Other neurobiological effects of adult-onset trauma include the impact on the hippocampus, responsible for memory, the amygdala, which is responsible for the mediation of emotional responses, and the prefrontal cortex, which controls higher thinking and impulse control (Sperry, 2016). In the event of a traumatic experience, these brain structures become overstimulated and potentially lead to changes in size and function, resulting in the potential for a person to develop Post Traumatic Stress Disorder (PTSD) (Sperry, 2016).

Outcomes of Trauma

Trauma has lasting effects, and there can be serious impacts on a person's mental health, including depression, anxiety, and PTSD (Jones & Cureton, 2014; Petruccelli et al., 2019). Untreated trauma may also lead a person to develop suicidal ideations or urges (Zhou, 2022). The DSM-5 list Post Traumatic Stress disorder as a trauma and stressor-related disorder (Pai et al., 2017). Mental health clinicians use the Diagnostic and Statistical Manual of Mental Health Disorders (DSM) to establish a diagnosis connected to a client's presenting problem. A diagnosis is qualified by presenting symptoms, timeframe, and examination of any comorbid diagnosis

(Regier et al., 2013). There have been multiple versions of the DSM throughout the years with the current version being the DSM-5, which was introduced in May 2013. The DSM-5 is comprised of 20 sections of mental health disorders. Further, the DSM-5 provides clinicians with a classification system for correctly identifying various trauma and stressor-related disorders (Regier et al., 2013).

While providing a classification system, the DSM-5 also operates from a dimensional approach; this contrasts with an oversimplified categorical approach (Regier et al., 2013). A dimensional approach allows the clinician to consider the severity of symptoms and to conceptualize the client's diagnoses on a continuum, evidenced by diagnosis specifiers such as "seasonal pattern" or "postpartum onset" (Regier et al., 2013). In previous versions of the DSM-5, PTSD was listed as an anxiety disorder. However, research conducted in the assembly of the DSM-5 found that anxiety was not the singular emotion experienced in PTSD and, therefore, would be more accurately categorized elsewhere. The category for PTSD was a newly established category of Trauma and Stressor-related disorders (Regier et al., 2013). To be diagnosed with PTSD, the DSM-V uses eight qualifying criteria. Criterion A states that a person was exposed to, through direct exposure, witnessing the trauma, learning about a loved one's exposure to trauma, or indirect exposure to trauma through professional contact, death, threatened death, serious injury, or sexual violence. Criterion B is defined by the re-experiencing of the traumatic through intrusive memories, nightmares, flashbacks, and emotional or physical reactivity after reminders of the traumatic event. Criterion C is defined by avoidance of stimuli connected to the trauma experience, including thoughts, feeling, and reminders. Criterion D is defined by an increase in negative thoughts or feeling patterns. Criterion D must include at least two of the following: inability to recall parts of the trauma, negative thoughts about oneself and the world, self-blame, negative

affect, decreased interest in activities, feelings of isolation, and difficulty experiencing positive affect. Criterion E requires two of the following arousal and reactivity symptoms: increased irritability or aggression, increased after the traumatic event, risky behavior, hypervigilance, increased startle response, difficulty concentrating, and difficulty sleeping. Criterion F requires that the symptoms mentioned above be present for over one month. Criterion G requires that the symptoms cause marked distress or functional impairment in a person's life.

Finally, Criterion H requires that medication, substance use, or other illness cannot explain the symptoms. The type of trauma experienced may influence the disorder's progress, including an immediate onset, delayed onset, chronic, or non-chronic (Schein et al., 2021). According to one systematic literature review, the lifetime estimated prevalence of PTSD in the United States is 3.4% to 26.9% in civilian populations and 7.7% to 17.0% in veteran populations (Schein et al., 2021). However, these numbers may be lower due to misdiagnoses, lack of healthcare interventions, and mental health stigma (Schein et al., 2021). Another population that suffers is those that do not meet the full criteria for PTSD and, therefore, may be diagnosed with sub-threshold PTSD. There is no consensus in the literature on how to define subthreshold PTSD. It is generally accepted that the difference between full- threshold PTSD and subthreshold PTSD is either only meeting 5 out of the six criteria or all six criteria without meeting the full criterion specifiers (Franklin et al., 2018). For example, in criterion D a person may only have one symptom instead of meeting the two-criterion qualifier.

Factors Influencing Trauma Outcomes

Risk Factors

Experiences of trauma have been found to impact a person psychologically, physically, socially, and environmentally (Powell et al., 2021; Taylor et al., 2021). Risk factors associated

with experiences of trauma include the development of internalizing psychological disorders such as depression, anxiety, and PTSD (Taylor et al., 2021), biological changes including epigenetic modifications resulting in changes in gene expression (Mehta et al., 2022), increased biological age counter to sequential age (Jackson et al., 2003), interpersonal dysfunction (Petruccelli et al., 2019), increased negative self-concept (Banz et al., 2022), and distrust in others (Parish-Plass, 2021).A person's chance of experiencing ongoing adverseeffects of trauma increaseswhen they have decreased support system, previous experiences of trauma, early-life experiences of trauma, maladaptive coping systems (Mattson, 2018), and certain personality traits, including higher neuroticism (Mattson, 2018).

Protective Factors

Protective factors are the variables that contribute to a positive and resilient response to life stressors or experiences of adversity in children and adults (Powell et al., 2015). *Protective factors* are, "Assets and resources within the individual, their life, and environment that facilitate the capacity for adaptation and bouncing back in the face of adversity" (Powell et al., 2021, p. 1439). Protective factors contribute on three levels: individual, family, and community (Powell et al., 2021).Individual protective factors include problem-solving skills, self-regulation, positive self-concept, talents, self-efficacy, sense of meaning in life, optimistic outlook, post-traumatic growth, internal motivation, and participation in physical exercise. Family protective factors include using parenting strategies, including providing structure, rules, supervision, predictable communication, and providing a rationale for established boundaries. Further, parental protective factors include the predictability of safety at home and in neighborhoods, parents' involvement in a student's education, and family values surrounding the importance of education.Community protective factors include the connection to positive friends and romantic partners and access to

safe and supportive schools (Powell et al., 2021). Individuals with increased protective factors are associated with more positive life outcomes than those with increased risk factors (Powell et al., 2021).

Manifestations of Trauma

The psychological impact of a traumatic experience can manifest itself in normal and abnormal ways. Normal levels of health anxiety may lead to expected coping behavioral precautions. However, amid a pandemic, health anxiety can flare to levels that can be maladaptive, leading to a potential for an increase in the diagnosis of mental health disorders (Stamu-O'Brien, 2020). Studies showed that compared to rates of depression and anxiety in 2019, the rates were six times higher in 2020 (Coley & Baum, 2021). Research finds that most people will experience a traumatic event in their lifetime (Nelson, 2019), which has been exasperated due to the onset of COVID-19 (Ashby et al., 2022).

Trauma and COVID-19

COVID-19 is considered a global disaster (Goldmann & Galea, 2014) and qualifies as a traumatic event for all those impacted. Whether through contracting the virus personally, or knowing someone who contracted it, experiencing isolation due to lockdowns, potential job loss, financial stress, and dealing with the uncertainty of health and wellbeing, everyone has been impacted by the repercussions of a global pandemic. The symptoms that occur in tandem with being exposed to the virus personally contracting the virus, or having a loved one exposed or contracting the virus, are synonymous with the clinical diagnosis of acute stress disorder (ASD). ASD symptoms include intrusive symptoms, negative mood, dissociation, avoidance, or arousal symptoms and occur within two days and do not exceed four weeks (Stamu-O'Brien, 2020). When considering these implications, it is unsurprising that we have seen an increase in mental health

issues and requests for counseling services. One group for which we have seen such impacts is young adults, including college students (Salimi, 2021).

COVID -19 and College Students

COVID-19 had an impact on mental health globally and nationally. One population that was significantly impacted was college students. College students experienced many consequences, including switching to an online format for classes, increased isolation, in some cases, loss of housing, and psychological distress. Minoritized college students, students with diverse ability statuses, and students who served as caregivers face heightened barriers during the pandemic. Minority-serving institutions experienced a decrease in enrollment compared to predominantly white institutions.

Further, minority students experienced increased violence and discrimination due to the social upheaval due to the significant injustice that minority people were experiencing in conjunction with COVID-19. Students with diverse abilities struggled with remote learning and not having the same educational support to meet their basic educational needs. Student caregivers faced the dilemma of having children or siblings who were homebound due to quarantine or stay-at-home orders. With the lack of access to childcare, students had to divide their attention and time to caring for others while still attending class online and completing assignments (United States Department of Education, 2021).

A study conducted by Monte et al. (2022) explored the impacts on first-year college students and the differences in impact across demographics. This study found that college students experienced harmful disruptions to their social life, finances, and academic career. Further, these factors are associated with higher symptoms of depression. Most of the depressive symptoms were associated with academic stress more than finances and social life. Latinx students and first-

generation college students reported more financial concerns than other populations. In a study conducted by Browning et al. (2021) with a sample of college students across the United States to investigate the impact of COVID-19 on college students' mental health, it was found that there was an increase in lack of motivation, anxiety, stress, and isolation. Among the factors that have negatively impacted college students during the pandemic, Intolerance of Uncertainty (IU) has emerged as a critical transdiagnostic factor that has been found to have a relationship with PTSD (Paltell et al., 2022). Specifically, IU is correlated with the avoidance symptoms of PTSD. (Paltell et al., 2022). These preliminary research studies have already demonstrated that college students have experienced several issues related to COVID, including depression, social isolation, and uncertainty linked to their academic, financial, and personal lives. One way that COVID-19 was managed was to enact lockdown procedures. A natural outcome of lockdown procedures is the increase in social isolation. It should be noted that quarantine and isolation are two different experiences (Brooks et al., 2020), resulting inincreased loss of contact and disruption in routine (Kira et al., 2021).

Quarantine is removing a person potentially exposed to a disease or virus from interacting with others to observe any outbreak of symptoms associated with a communicable virus or disease. In contrast, isolation is the procedure of removing people who have contracted a communicable virus from those who have not contracted the virus. In the case of being quarantined, there is no definitive outcome, and the person or group of people is awaiting diagnosis, whereas those isolated have been given a positive test diagnosis. Nonetheless, for those who are quarantined or isolated, the experience of the loss of social interaction, confinement, fears associated with contracting the virus, boredom, lack of appropriate supplies, stigma, and misinformation have been identified as the key stressors (Brooks et al., 2020). Brooks et al. (2020) reviewed the literature to find evidence

of the psychological impact of quarantine and found that quarantine lasting longer than ten days is more highly associated with people experiencing PTSD symptoms. Brooks et al. (2020) findings suggest that the impact of quarantine is far-reaching and has enduring psychological impacts.

In one study looking at traumatic injury survivors, it was found that people who experienced a traumatic injury during COVID-19 were significantly more susceptible to experiencing adverse mental health outcomes, such as depression and anxiety than those who experienced traumatic injury before the outbreak of COVID-19 (Heyman et al., 2022). This is partly attributeddue to the lack of social support and increased challenges connected to traumatic isolation. One challenge that may have deleterious effects is the lack of access to health care services, such as physical therapy. Physical therapy protects those recovering from a traumatic injury (Heyman et al., 2022). Further, the uncertainty faced due to the ongoing nature of COVID-19 and the unpredictable consequences of contracting the virus led to increasedstress in traumatic injury survivors (Heyman et al., 2022). In a measure developed to identify the potentially traumatic impact COVID-19 had on a person, it was found that there are three general impacts, including fear of future infection, economic impacts, and routine disruption, including experiences of social isolation. Further, it was found that the increase in isolation procedures was positively correlated with the amount of anxiety, depression, and secondary traumas (Heyman et al., 2022).

Attachment

Attachment style is, "a deep and enduring emotional bond that connects one person to another across time and space" (Salcuni, 2015). A person's attachment system is activated in distress togain proximity to others (Brulin et al., 2022). John Bowlby was a proponent of the relationships between mothers and children. Although trained in psychoanalysis, Bowlby departed from psychoanalytic thought in three ways: actual experience versus fantasy, the cause

of psychological conflict, and self-preservation behaviors. He proposed that a person's interpersonal perceptions and behaviors are based on their initial contact with caregivers (Creeden, 2009).

Contact with caregivers can influence the development of a positive or negative internal working model about the self and the exterior world (Boroujerdi et al., 2019). These first relationships and internal working model begin to form a child's attachment style, which can be categorized in the literature as secure, dismissive (avoidant), and preoccupied and fearful (Kurdek, 2002). Previous research asserts that the primary caregiver's attachment style highly impacts a person's attachment style (Kim et al., 2021); for example, a mother with a pre-occupied attachment style will interact with the child in such a way that the child's attachment style is generally determined and impacted by significant life events.This early establishment of an attachment style does not mean that a person's attachment style cannot change throughout the lifespan from negative to positive (Creeden, 2009). For example, if a person is exposed to a traumatic life event, their attachment style may increase or decrease their vulnerability to developing PTSD (Woodhouse et al., 2015). Conversely, a person who does not have a secure attachment base has been found to have a shift in their attachment style to become more secure throughout experiencing people with secure attachments or personal experiences with corrective emotional experiences. Further, negative attachment experiences in childhood and adulthood are linked to pessimism, low self-regard, hopelessness, and suicidal behaviors (Boroujerdi et al., 2019 Recent studies (Salcuni, 2015) utilized neuroimaging to corroborate Bowlby's original hypotheses and further show clinicians' areas of anxious, depressive, and adaptive functioning.Mary Ainsworth (Duschinsky, 2020) expanded upon Bowlby's research on attachment. Her major contribution to this research included her *Strange Situation* procedure. In

this procedure, the researcher would ask the mother to bring the child into the observation room, and the mother and child would be separated at two different times in order for the researcher to observe the child's behaviors. Children with a secure attachment would explore the room and then return to their mother when they became upset to be soothed, and then would return to playing once soothing took place (Duschinsky, 2020, p 4. Conversely, children with an insecure and avoidant attachment would disengage attention toward the caregiver to minimize displayed distress, whereas insecure and anxious children increased signs of distress to gain the caregiver's attention (Spies & Duschinsky, 2021). Additionally, longitudinal studies have further validated the claims of attachment theory and the link of attachment style to developmental wellbeing (Duschinsky, 2020, p 4.

Corresponding to this research, a longitudinal study conducted by Castellini et al. (2022) to evaluate the pre- and post-impact of COVID-19 in Italian women found that women with insecure attachment and a history of traumatic experiences were found to suffer more mental health disparities because of the pandemic. This study did not consider other individual risk factors, such as self-compassion and IU, that may also contribute to a person's mental health. However, there is a lack of consensus in the literature concerning how attachment styles should be measured (Griffin & Bartholomew, 1994; Fraley, 2015; Ravitz et al., 2010; Konrath et al., 2014). Griffin and Bartholomew (1994), building off previous seminal research on attachment theory (Hazan & Shaver, 1987), proposed a four categorical approach to the attachment styles which states that a person will fit predominantly into one category of attachment (secure, pre-occupied, dismissing, or fearful). This categorical approach also recognizes that an individual will fit into other attachment categories to varying degrees but ultimately have a dominant attachment style (Griffin & Bartholomew, 1994). However, the categorical approach has been

criticized as problematic due to the low reliability of the psychometric instruments in establishing attachment categories (Collins & Read, 1990; Simpson, 1990). Further, if research is conducted using an unreliable categorical approach, Fraley et al. (2015) propose that valuable information will be lost or misrepresented in the literature concerning attachment information. Since the four categorical psychometric instruments were developed, a contrasting approach to attachment has been developed, referred to as dimensions (Fraley et al. 2015). The dimensional model proposes a continuous approach between anxiety and avoidance. In contrast to identifying with a distinct category, the dimensional model proposes that a person will display varying levels of anxiety and avoidance, which may manifest in the theoretical categories of attachment (Fraley et al., 2015).

Anxiety

The disruptions and uncertainty of COVID-19 naturally corresponded to increased experiences of anxiety (Cupid et al., 2021; Deniz, 2021). *Anxiety* has been defined as "an emotion characterized by feelings of tension, worried thoughts and physical changes" (American Psychological Association (APA), n.d.). The research on anxiety is extensive, considering onset and diagnosis (Shedletsky & Endler, 1974). This research has demonstrated that anxiety can have a deleterious effect on an individual's cognitive functioning and processing (Sant'Anna et al., 2020). While anxiety is a common experience, the ongoing effects of increased anxiety, for example, during a pandemic, can significantly negatively affect a person's mental, emotional, and physical health (Sant'Anna et al., 2020). People with increased anxiety are more prone to experience mental health issues and have difficulty regulating their emotions (Ashour, 2022).There are many different presentations of anxiety, including performance anxiety (Meola

et al., 2020), generalized anxiety disorder, and test anxiety ; however, anxiety can be categorized into state or trait anxiety.

Spielberger (1972) proposed a model of State-Trait Anxiety, which proposed two types of anxiety: state and trait. State anxiety refers to situational anxiety, while trait anxiety refers to a long-term consistent personality trait. A personality trait is characterized by the following; how an individual sees the world, predictable dispositions that lead to predictable responses on behalf of the individual, emotions manifest differently for individuals, and a positive relationship between the personality trait and the emotional state (Shedletsky & Endler, 1974; Spielberger, 1972). In other words, trait anxiety is a term used to describe how anxiety-prone a person may be, while state anxiety describes what emotion a person may feel atthat moment (Julian, 2011). It should be noted that anxiety is distinct from worry in that anxiety is primarily an emotive process, while worry is categorized as a cognitive process. Trait anxiety derives from experiences with the world around them but can also be a genetic predisposition (Moser et al., 2012). Research has suggested that those with higher trait anxiety will have less effective coping skills (Johnson, 2009). In addition, on a biological level, people with higher trait anxiety appear to be preset to maintain higher levels of stress (Collins, 2016; Behar et al., 2010), thus impacting their ability to cope when there is an undeterminedamount of stress, such as during a global pandemic.

One population that experiences high levels of stress is college students. This is often due to the demands of a rigorous academic schedule and the stress associated with these demands. Bruffaerts et al. (2018) conducted a study that found that 35% of students entering college are diagnosed with mental health issues.. Maykrantz et al. (2020) identified the multiple adverse effects that stress could have on college students' mental health. This stress can coincide with

sleep disturbance, depression, suicidal behavior, illness, and the increased use of substances to cope with the stress. Further, students who utilize maladaptive coping strategies have greater levels of depression and anxiety (Mahmoud et al., 2012).

COVID-19 left no life untouched, including higher-education institutions (Parker et al., 2021). Son et al. (2020) found that 71% of university students were experiencing stress and anxiety surrounding the COVID-19 pandemic. The ongoing isolation due to the sudden lack of social connection further instigated this anxiety and stress. Some students returned home after universities such down and above and beyond isolation and technology issues students were now faced with navigating having a private workspace for synchronous classes and classwork, reliable childcare to attend class and complete coursework, and in some cases, new work schedules that conflicted with school classes (Gillis & Krull, 2020). Further, students faced a lack of certainty surrounding the consequences of COVID-19 and how it will affect their learning environment. Corbera et al. (2020) found that a decrease in certainty contributed to a person's psychological distress.

Intolerance of Uncertainty

IU was initially discussed in the literature in 1948 and was introduced as an Intolerance of Ambiguity (Frenkel-Brunswick, 1948). Later, in the 1990s, researchers proposed a new cognitive model of generalized anxiety disorder in which intolerance of uncertainty emerged as one of the four elements that make up the precursor to people who are found to have GAD (citation needed). The definition of IU has changed throughout the years of the literature but is currently defined as "intolerance of uncertainty – a dispositional characteristic that arises from a set of negative beliefs about uncertainty and its connotations and consequences – is an important predictor of trait level worry and of the tendency to interpret ambiguous situations in a negative

manner, and as such, is considered to be a cognitive disposition that might confer risk for GAD" (Birrell et al., 2011, p 1200). Further, IU has two dimensions: inhibitory anxiety and prospective anxiety. Inhibitory anxiety is characterized by a person the lack of response or action when facing uncertainty, whereas prospective anxiety is characterized by a preoccupation with the threats of events that may happen in the future (Maftei & Lazarescu, 2022). The higher the occurrence of intolerance for uncertainty, the more likely a person is to experience distress in uncertain situations. IU has been linked to being one of the underlying factors of generalized anxiety disorder and is an essential factor for mental health caregivers to consider when working with individuals (Maftei & Lazarescu, 2022). IU appears to have four contributing factors, including positive beliefs about worry (a belief that worrying will help to avoid problems), negative problem orientation (a negative belief concerning one's to solve problems successfully, serious or minor, they are presented with), and cognitive avoidance (a person's efforts to avoid thoughts and images concerned with an event or situation) (Maftei & Lazarescu, 2022).

Individuals with a high intolerance of uncertainty have a hard time in unpredictable situations. A high IU is usually in tandem with the characteristic of high worry, which leads to a deficit in cognitive regulation of emotions, thus increasing the likelihood of a person developing post-traumatic stress after the experience of a traumatic event. In a study conducted by Bardeen (2013) focused on examining worry, IU, and Post-traumatic stress syndrome (PTSS), it was found that hyperarousal symptoms were associated with both worry and IU and positively correlated with PTSS. Therefore, a person's IU should be of great concern and attention to all mental health practitioners as the higher their IU, the more likely that they will have a hard time recovering from a traumatic event due to IU's connection to the development of cognitive processes that are fixated on threat detection, thus leading to lower emotional cognitive

processing of the event leading to greater risk of developing symptoms of PTSD, specifically hyperarousal.

The COVID-19 outbreak brought about ongoing experiences of uncertainty and fear due to the unknown outcomes of contracting the virus. This uncertainty expanded across multiple topics including economic uncertainty. People were at risk for or lost their jobs due to the prevalent economic hardships that hit the nation (Montenovo et al, 2022). Further, school shutdowns led to families having to scramble to find appropriate childcare, which increased financial burdens. On the other hand, there were professions, like those in the medical field, who were short on staff due to COVID outbreaks leaving hospitals overflowing with patients and backed up client care. This hospital patient influx and increased COVID-19 cases had deleterious effects on medical staff including increased reports of anxiety and depression (Li et al., 2022). Interpersonally, people were not able to see their loved ones and friends for several months or longer. This period of separation left people feeling socially isolated and unsure of when they would be able to connect once again.

These areas of uncertainty and health risks and fears highlight the need to consider how IU may have mediated these issues. Studies indicated that people with an intolerance of uncertainty experience increased fear of COVID-19 (citations needed). A study conducted by Chen et al. (2018) found that IU had predictive abilities in relation to state anxiety. This increased fear negatively impacts a person's wellbeing (Deniz, 2021). However, certain protective factors have been found to mediate the adverse effects of IU (Maftei & Lazarescu, 2022). For example, a study examining the relationship between self-compassion and the intolerance of uncertainty found that self-compassion negatively impacts the intolerance of uncertainty, increasing overall well-being (Maftei & Lazarescu, 2022).Thus, in considering the

impact or relationship of IU, it is essential also to examine the variables that may influence the impact or outcomes associated with IU.

Self-Compassion

Researchers have noted that a component of mental health may be one's ability to have compassion for others and themselves (Neff et al., 2019). Depression, anxiety, and other psychological health concerns can be linked to consistently low self-regard (Kolubinski et al., 2018). In a society marked by individualism and accomplishment, there is a breeding ground for those marked by low self-esteem to suffer psychologically. Initially, researchers tried to explain and intervene by exploring the impact of low self-esteem and interventions to increase self-esteem (Neff et al., 2019). However, it has been found that focusing on self-esteem may lead to more deleterious effects than positive ones (Amad et al., 2021). Specifically, self-esteem has been widely researched and criticized as furthering people's self-centeredness and increasing people's self-appraisal only in comparison to others (Xu, Huebner, & Tian, 2020). These comparison behaviors may lead to becoming more judgmental of others to protect a person's ego. This may, in turn, create more division and, in some extreme cases, violence (Neff et al., 2019). In other words, self-esteem relies on extrinsic evaluation methods, creating a reliance on others' approval of self and ameliorating any feelings of inadequacy through confirming by comparison that they are better than their peers. These unsustainable efforts do not support prosocial behavior concurrent with mental health and wellness.

In contrast, self-compassion results from three concepts working together: fostering self-kindness, adopting a common humanity outlook, and practicing mindfulness. Combining these three concepts works together to allow a person to deploy self-compassion. Furthermore, the mental health benefits of self-compassion have been identified as decreased risk of depression

and anxiety and increased overall wellbeing (Deniz, 2021). This may be due to increased proactive behaviors, an optimistic perspective, and the ability to process and regulate difficult emotions corresponding to self-compassion (Deniz, 2021). Kristin Neff has conducted most of the modern research on self-compassion. Neff (2003) sought to delineate the construct of self-compassion from self-esteem. *Self-compassion* is, "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness" (Neff, 2003, p. 86-87). Self-compassion also involves offering a non-judgmental understanding of one's pain, inadequacies, and failures, so that one's experience is considered part of the larger human experience (Athanasakou, 2020; Neff, 2003). To address these variables, Neff (2003) also worked to develop a psychometric questionnaire entitled the Self-Compassion Scale (SCS). This scale focuses on measuring a person's overall level of self-compassion. The scale has six subscales (self-compassion, self-judgment, common humanity, isolation, mindfulness, and overidentification) that correlate with the three attached concepts of self-kindness, common humanity, and mindfulness and concept inverse (Neff, 2003). Concept inverse pertains to self-compassion with the inverse subscale of self-judgment, common humanity versus isolation, and mindfulness versus overidentification.

A growing body of literature supports using self-compassion interventions to increase a person's emotional regulation, decreasing the effects of trauma and promoting positive outcomes (Woodfin et al., 2021; Moore et al., 2022; Creaser et al., 2022; Ashour, 2022). Research demonstrated these components of self-compassion in a randomized control trial conducted by Woodfin et al. (2021). This study found that using a 3-week self-compassion intervention with college students resulted in a significant decrease in the participants' level of anxiety and depression (Woodfin et al., 2021). In a parallel study, Moore et al. (2022) sought to understand

the positive effects of a 24-week self-compassion intervention on those recovering from trauma who also suffered from substance use. Moore et al. found that using a Mindfulness-based Opioid Use Disorder Care Continuum (M-ROCC) focused on self-regulation skills, including self-compassion, increased participants' compassionate self-responding. However, concurrent findings showed that individuals with a higher ACE (Adverse Childhood Experience) score had significant difficulty decreasing the use of negative self-appraisal (Moore et al., 2022).

As noted, the COVID-19 pandemic brought about stress, illness, and many mental health disparities due to increased stress (Sant'Anna et al., 2020). However, as discussed there, self-compassion may operate as a protective factor. Self-compassion may mediate the impact of these events or stress (Ashour, 2022). Most recently, neuroscience has utilized neuroimaging procedures such as Electroencephalogram (EEG) to identify the underlying neurobiological mechanisms of self-compassion interventions (Creaser et al., 2022). In this research, self-compassion reduced the activation of a person's threat response system and reduced neurological PTSD symptoms after one brief self-compassion intervention (Creaser et al., 2022). Similarly, in a study with Veterans who participated in a loving-kindness mediation intervention (12 weeks) aimed at increasing self-compassion were found to experience a decrease in PTSD symptoms (Kearney, 2013).

Statement of the Problem

There is a high likelihood that counselors will work with clients who have experienced trauma (Foreman, 2018). Most recently, that included COVID-19 as a collective experience that has been experienced globally, nationally, and individually. As of March 2020, this pandemic has led to millions of deaths, increased isolation, mandated lockdowns, uncertainty (Wang et al., 2022), national job loss (Gowayed et al., 2022), violence and discrimination (Donnelly et al.,

2022; Tracy et al., 2022; Schleimer et al., 2022), political unrest (Njoku, 2022), and mental health disparities (Newnham et al., 2022; Cote et al., 2022). While some individuals may not have personally contracted the virus, there is still a mental and emotional toll that the past three years have taken on all individuals. Moreover, this impact may continue to be demonstrated in individuals' psychological and physical health for several years (Planchuelo-Gómez et al., 2020; Marahwa et al., 2022; Nasri et al., 2022). However, there is a paucity of research on the characteristics of a person's personality traits, protective factors (attachment style and self-compassion), risk factors (intolerance of uncertainty), and how these factors impact trauma outcomes. As noted, understanding how these factors can impact a person's experience with trauma can assist counselors in working with clients who are inevitably impacted by trauma. Moreover, the variables of trauma, attachment, IU, and self-compassion have been previously explored but not the combined impact of all these factors on trauma outcomes.

Significance of the Study

There is a paucity of research addressing the combined factors of ACEs, attachment style, Intolerance of Uncertainty, and self-compassion on trauma outcomes. The effects of stress and trauma make it imperative that clinicians understand the impact the COVID-19 pandemic has had, recognized or unrecognized, on their clients. Therefore, this study sought to understand how attachment style, Intolerance of Uncertainty, and self-compassion relate to a person's trauma outcomes. While there have been many disparities concerning COVID-19, clinicians will benefit from identifying the factors that help clients sustain their mental health, such as self-compassion and attachment style, to promote positive outcomes from their treatment. Further, clinicians should also be aware of the factors that hinder mental health, such as adverse childhood experiences and higher levels of intolerance of uncertainty.

Purpose of the Study

This research study aimed to investigate the impact of trauma experiences on adults with varying levels of self-compassion, intolerance of uncertainty, and dimensions of attachment. The study examined the psychosocial variables of adverse childhood experiences, self-compassion, attachment dimensions, and intolerance of uncertainty. Specifically, how these variables relate to the experience of trauma, as measured by the PCL-5. Further, this study aimed to understand how the potential protective factor of self-compassion relates to adverse childhood experiences, attachment style, and Intolerance of Uncertainty.

Research Questions

The following questions define the purpose of this study:

1. What is the relationship between self-compassion, Intolerance of Uncertainty, attachment style, and the impact of traumatic events?

2. Which variable (Self-compassion, Intolerance of Uncertainty, or attachment style) contributes most to the outcome of the impact of a traumatic event?

Summary

In summary, mechanisms of self-compassion may mediate a person's fear or response to trauma (Ashour, 2022). This may include the increased ability to process difficult emotions and decreased self-judgment in the face of hardships. Nevertheless, limited studies examine these factors, specifically the impact of factors that may mediate this response. Therefore, when considering responding to the stress and long-term issues associated with trauma, mental health clinicians must have the appropriate knowledge to assess a person's self-compassion and intolerance to uncertainty. In emerging adults and college students, it has already been shown that there is an increase in mental illness due to other stressors, stressors only more intensified during COVID (Woodfin et al., 2021). These factors highlight the necessity to provide effective

treatment and interventions to help promote the prevention of students experiencing mental health concerns.

Further research is needed to define how the variables of childhood trauma, intolerance of uncertainty, attachment style, and self-compassion relate to people's experiences of trauma psychopathology in adulthood. There has been preliminary research on self-compassion mechanisms that contribute to positive trauma outcomes (Woodfin et al., 2021; Moore et al., 2022; Sant'Anna et al., 2020; Ashour, 2022; Creaser et al., 2022; Kearney, 2013). However, more studies are needed to consider and explore the claim that self-compassion benefits trauma survivors across populations. Further, studies need to be conducted that factor in an understanding of individual differences (attachment style and IU) that may, along with self-compassion, impact the trauma outcomes (Creaser et al., 2022; Maftei & Lazarescu, 2022; Moore et al., 2022; Gerdes et al., 2021; Woodfin et al., 2021).

Chapter 2

Methodology

This quantitative survey research study examined the relationship between intrapersonal differences and the mediation of trauma outcomes. The study was conducted to assess which of the variables of self-compassion, attachment style, and intolerance of uncertainty correlated with low levels of PTSD symptoms. The independent variables included self-compassion, attachment style, and adverse childhood experiences, while the dependent variable was PTSD symptoms, as measured by the PCL-5. Research has established intrapersonal differences as a contributor to promoting desirable and adaptive trauma outcomes (Creaser et al., 2022; Maftei & Lazarescu, 2022; Moore et al., 2022; Gerdes et al., 2021; Woodfin et al., 2021). Therefore, this study aimed to expand the research on trauma to include specific intrapersonal characteristics that can prevent or lessen the effects of trauma.

Research Questions

The following questions defined the purpose of this study:

1. What is the relationship between self-compassion, Intolerance of Uncertainty, attachment style, and adult trauma psychopathology outcomes?
2. Which variable (Self-compassion, Intolerance of Uncertainty, or attachment style) contributes most to trauma psychopathology outcomes?

Participants

A sample size estimate was conducted using the software G*Power (Faul et al.,2007) and assuming moderate effect sizes for the multiple regression with five predictors, and effect size of 0.15, statistical power of .80, and a p-value <.05 (Cohen et al., 2003). A medium effect size was chosen to limit Type I and Type II errors while yielding statistically significant results. The analyses yielded an estimate of 18.4 participants per condition or 92 participants.

The participants for this study were from Auburn University, comprised of emerging adults who were enrolled as undergraduate and graduate students. Participants were recruited from undergraduate and graduate courses in the Special Education Counseling and Rehabilitation (SERC) department within the College of Education at Auburn University. To be included, participants had to have been 18 years or older. Participants were surveyed using the Adverse Childhood Experiences Scale (ACES), self-compassion scale, relational styles scale, Intolerance of Uncertainty Scale, and the PTSD Checklist (PCL-5) to identify those with past experiences with trauma and the varying psychosocial factors that contribute to trauma outcomes. In addition, those with trauma experiences were asked if they were enrolled as a student at a college or university from the spring semester of 2020 through the spring semester of 2022. Those who were not enrolled at a college or university during that timeframe were directed to the end of the study.

As reported in Table 1, 134 people participated in the study. Of the 134 participants, 123 participant data was included in the data analysis. A total of 23 cases were excluded because the participants did not complete all measures (required 85% completion of a measure for it to be included). Out of 123 participants, 122 participants reported their gender; 15 (12.2%) participants indicated they identified as a man, 106 (86.2%) participants indicated they identified as a woman, and one person (.8%) identified as non-binary. Of the 123 participants, 122 indicated their current student status; 2 (1.6%) indicated they were freshmen, 36 (29.3%) were sophomores, 36 (29.3%) were juniors, 28 (22.8%) were seniors, 6 (4.9%) were 5^{th}+ year senior, and 14 (11.4%) were graduate students.

Procedures

The statistical procedure used to collect data for this study was a quantitative methods approach. After IRB approval, the participants were recruited from undergraduate courses in the Special Education Rehabilitation and Counseling Department (SERC) and the SONA platform. Participants were given a QR Code or Qualtrics link to an anonymous survey. Each participant was allowed to review the informational letter on Qualtrics and consent to continue in the research study. This survey packet contained the following: a demographics survey developed by the researcher, measures including intolerance of uncertainty (Carleton, 2007), PTSD Checklist, self-compassion scale (Neff, 2003), and relationship assessment scale (Griffin and Bartholomew, 1994). To maintain participant anonymity, the researcher turned off IP address collection through Qualtrics. All data for this study was collected online via a survey method utilizing a convenience sample of college students 18 or older from a large university in the Southeast.

Instrumentation

Brief Demographic Measure

A demographic survey was developed for this study (Appendix C) and is focused on collecting demographic data, including gender, education, and race/ethnicity. Additional questions included experiences with COVID-19 exposure, loss, and trauma. **Adverse Childhood Experiences (ACEs)**

The Adverse Childhood Experiences checklist, developed by Felitti (1998), is a ten-item scale that assesses for past experiences of physical abuse, emotional abuse, sexual abuse, and household dysfunction (e.g., parental substance abuse, domestic violence, mental illness experienced by a parent(s) prior to the age of 18. Respondents answer “yes” or “no” to whether they have experienced the adversity, with a total ACE score ranging from 0-10. The prevalence of respondents answering “yes” reflects more significant experiences of childhood adversity. A

score of four or above has been previously linked in the literature to adverse health outcomes in adulthood (Felitti, 1998). In a study conducted by Ford et al. (2014) found Cronbach's Alpha indicated high internal consistency (.78) and test-retest reliability of r =.61.

Relationship Scale Questionnaire

The Relationship Scales Questionnaire (RSQ) was developed by Griffin and Bartholomew (1994) to measure four types of attachment styles: secure, fearful, dismissing, and preoccupied. The RSQ was designed to measure both the categorical styles (secure, preoccupied, dismissing, and fearful) and dimensional (avoidant and anxious) (Fraley et al.,2015) aspects of adult attachment. The RSQ is comprised of a total of 30 items, each rated on a 5-point Likert scale. There are four groups of questions linked to the four different attachment styles. Once completed, the RSQ provides participants with a score for each style of relating. The RSQ is a widely accepted scale to measure adult attachment (Both & Best, 2017). In addition, the RSQ has demonstrated adequate internal reliability for the fearful subscale (α = .79) and dismissing subscale scale (α = .64), indicating that this instrument is a reliable measure of these two attachment types. However, the reliability of the subscales Secure and Preoccupied are at a lower level of reliability (Cronbach's α = .32 and .46) (Bäckström & Holmes, 2001). For the dimensional subscales, previous research (Roisman et al., 2007) reports that the RSQ has demonstrated adequate reliability for both dimensions, the anxiety dimension (Cronbach's α = .81) and avoidance dimension (Cronbach's α = .85).

Intolerance of Uncertainty Scale-12 (IUS-12)

The IUS (Intolerance of Uncertainty Scale) was developed by Carleton (2007) to measure the intolerance of uncertainty. The IUS is available in the standard version and the short version. The standard version has 27 items, and the short version has 12 items. Each item is rated on a 1

(Not at all characteristic of me) to 5 (Entirely characteristic of me) point Likert scale. A person's score can range from 12 to 60, with a higher score indicating a greater measure of intolerance of uncertainty. This study utilized the IUS-12 short form with the two subscales of Prospective Intolerance of Uncertainty and Inhibitory Intolerance of Uncertainty. Prospective Intolerance of Uncertainty is "a desire for predictability of future events, triggered by anxious apprehension about uncertainty, and prompting engagement in strategies to reduce uncertainty (Hong & Lee, 2015, p. 606). Inhibitory IU is conceptualized as the measure of "paralysis and impaired functioning arising from uncertainty" (Hong & Lee, 2015, p. 606). Prospective IU is associated with seven items (e.g., unforeseen events upset me greatly), and Inhibitory IU is associated with five items (e.g., uncertainty keeps me from living a full life) (Birrell et al., 2011). Previous research demonstrates that the IUS-12 has high internal consistency (Cronbachs $\alpha = .93$ for total score, Prospective IU subscale $\alpha = .90$ and Inhibitory IU subscale $\alpha = .90$) and a verified factor validity (Jacoby et al., 2013).

Self-compassion Scale

Neff (2003) developed a psychometric questionnaire, the Self Compassion Scale (SCS), to measure a person's overall self-compassion. As well as measuring a person's overall self-compassion, the scale has six subscales. The subscales are self-compassion, self-judgment, common humanity, isolation, mindfulness, and overidentification. The three positive subscales (self-compassion, common humanity, and mindfulness) correlate with the negative subscale (i.e., self-compassion versus self-judgment). This study will utilize the total overall compassion scale, with a higher score indicating greater levels of self-compassion. The SCS overall has demonstrated adequate internal reliability (Cronbach's alpha = .92), as well as the six subscales (ranging from Cronbach's $\alpha = .75$ to .81), indicating that this instrument is a reliable measure of

measure self-compassion (Neff et al., 2019). In addition, the construct validity of this measure has been reported as adequate (Neff et al.,2019).

PTSD Checklist for the DSM-V (PCL-5)

The PTSD Checklist (PCL-5) is a self-report measure that assesses PTSD symptoms corresponding to DSM-V criteria. It is a 20-item survey that is linked to the 20 PTSD symptoms in the DSM-V (Bovin et al., 2015). Respondents are asked to answer each question about the last 30 days using a 0-4 ranking scale. With a ranking of 0 corresponding to the statement "very little" to a ranking of 4 corresponding to "very often." A score is assigned based on adding up respondents' answers for a total score ranging from 0 to 80. Respondents scoring a 31 and above suggest the respondent be referred for evidence-based PTSD treatment (Bovin, 2015). A score lower than 31 may indicate subthreshold PTSD, and client responses should be further included in the treatment planning process. Sample statements include repeated disturbing dreams, avoiding memories, blaming yourself or someone else, and being super alert and watchful. The PCL-5 is a psychometrically sound instrument for determining the need for PTSD treatment (Blevins et al., 2015). A validation study conducted by Blevins et al. (2015) found high internal consistency (.94). Additionally, a study conducted by Bovin et al. (2015) found a high internal consistency (.96) and test-retest reliability of R=.84.

Data Analysis

This study utilized a quantitative approach with a survey method and a multiple regression design. This design was chosen to measure the relationship between the psychosocial variables of ACEs, self-compassion, attachment styles, and intolerance of uncertainty with trauma outcomes. Predicator and criterion variables were measured using the Adverse Childhood Experiences Scale (ACEs), Self-Compassion Survey (SCS), Relational Styles Questionnaire

(RSQ), the Intolerance of Uncertainty Survey -12 item (IUS-12), and the PTSD checklist (PCL-5). The independent variables included adverse childhood experiences, self-compassion, attachment style, and Intolerance of Uncertainty, while the dependent variable was PTSD symptoms, as measured by the PCL-5. Multiple regression was used to determine if there is an overall significant relationship between the psychosocial variables and adult trauma psychopathology (research question 1). Additional backward regression was used to determine the most predictive variables to the dependent variable of adult trauma outcomes. A multiple linear regression was used to determine the relationship between psychosocial variables (adverse childhood experiences, self-compassion, intolerance of uncertainty, and attachment style) and trauma psychopathology outcomes. In the multiple regression, the PTSD checklist (PCL-5) was entered as the dependent variable, and the psychosocial and adverse childhood experiences were entered as the independent variables. Next, a backward linear regression was used to determine the relationship between adverse childhood experiences, psychosocial variables, and trauma psychopathology. The backward linear regression was completed using scores from the PCL-5 as the dependent variable. The backward linear regression process started with the full model and sequentially eliminated variables with greater than 10% probability of association ($p > .10$), bringing the model to the final restricted model. For this research, the alpha level was established as *a priori* to $\alpha = 0.05$. In addition to the backward regression, a manual removal of the self-compassion was completed. A summary of the results can be seen in Table 5.

Definition of Terms

Trauma- is "an emotional response to a terrible event" (American Psychological Association (APA), n.d.). Further, it is defined as "any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings intense enough

to have a long-lasting negative effect on a person's attitudes, behavior, and other aspects of functioning." (American Psychological Association (APA), n.d.).

Attachment Style- is "a deep and enduring emotional bond that connects one person to another across time and space" (Salcuni, 2015).

Self-Compassion- is defined as, "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness" (Neff, 2003, p. 86-87).

Intolerance of Uncertainty- defined as a dispositional characteristic that arises from a set of negative beliefs about uncertainty and its connotations and consequences – is an important predictor of trait-level worry and of the tendency to interpret ambiguous situations in a negative manner, and as such, is considered to be a cognitive disposition that might confer risk for GAD" (Birrell et al., 2011; Koerner & Dugas, 2008).

Chapter 3

Results

This quantitative research study aimed to investigate the effects of the psychosocial variables of ACEs, self-compassion, attachment style, and intolerance of uncertainty on the relationship between early childhood adversity and adult psychopathology. Further, this study aimed to understand how self-compassion relates to attachment and IU. This research study examined the relationship between psychosocial differences and the impact on trauma outcomes (psychopathology). The study assessed which of the variables of ACEs, self-compassion, attachment style, and intolerance of uncertainty correlated with high PTSD symptoms.

Participants

Table 1 provides an overview of the participants' demographics. COVID-19 related experiences are reported in Table 2. 122 participants reported COVID-19 related experiences. Of the 122, 87 (70.7%) reported either being sick or hospitalized or someone close to them being sick or hospitalized due to COVID-19. Of the 122 participants, 117 (95.1%) reported either themselves or someone close to them having to quarantine due having COVID-19 symptoms. In addition, 117 (95.1%) reported either themselves or someone close to them testing positive for COVID-19, while 30 (24.4%) reported that someone close to them died due to COVID-19 illness. Forty-three participants (35%) reported experiencing economic hardship due to COVID-19.

Table 1

Demographic Information

Characteristic	N	Percentage
Enrolled in College or University spring 2020-spring 2022	123	100%

Gender	Male	15	12.2%
	Female	106	86.9%
	Non-Binary	1	.8%
Age	Over 18	123	100%
Race/Ethnicity	White	97	78.9%
	African American	14	11.4%
	Latinx/Hispanic	3	2.4%
	Asian American	3	2.4%
	Arab American	1	.8%
	Other	4	3.3%
Year in College	Freshman	2	1.6%
	Sophomore	36	29.3%
	Junior	36	29.3%
	Senior	28	22.8%
	5th year Senior	6	4.9%
	Graduate Student	14	11.4%

Table 2

COVID-19 Related Experiences

Have you or someone close to you been sick or hospitalized due to having COVID-19?			
	Yes	87	70.7%
	No	35	28.5%
Have you or someone close to you have to quarantine because of having COVID-19 symptoms?			
	Yes	117	95.1 %
	No	5	4.1%
Have you or someone close to you tested positive for COVID-19?			
	Yes	117	95.1%
	No	5	4.1%
Has anyone close to you died due to COVID-19 illness?			

	Yes	30	24.4%
	No	92	74.4%
Have you experienced economic hardship due to COVID-19?			
	Yes	43	35%
	No	79	64.2%

Reliabilities for Measures

The mean, standard deviation, and reliability statistics are reported in Table 3 for the Adverse Childhood Experiences Scale (ACEs), Self-Compassion Scale (SCS), Relational Styles Questionnaire (RSQ), Intolerance of Uncertainty Scale (IUS-12), and the PTSD Checklist (PCL5). In previous research studies (Neff et al., 2019) the SCS had adequate reliability (Cronbach's alpha = .92). In the present study the reliability was consistent with previous research (Cronbach's alpha = .85). Previous research (Roisman et al, 2007) reports the RSQ has demonstrated adequate reliability for both dimensions, anxiety dimension (Cronbach's α = .81) and avoidance dimension (Cronbach's α = .85). In the present study the reliability for the RSQ dimensions of anxiety and avoidance dimensions was adequate (Cronbach's α = .776, .786).

Table 3

Scale Reliability Statistics

Scale	N	Cronbach's Alpha	Mean	Standard Deviation
Adverse Childhood Experiences Scale (ACES)	10	.778	3.79	.224
Self-Compassion Scale (SCS)	12	.854	3.01	.566
Relationship Scales Questionnaire (RSQ)	30	.837	2.99	.478
Anxiety	5	.776	2.79	.905
Avoidance	8	.786	2.68	.709

Intolerance of Uncertainty Scale (IUS-12)	12	.900	2.92	.782
PTSD Checklist (PCL-5)	20	.959	2.49	1.01

Note: N= number of items on scale

Results

Research Question 1: What is the relationship between adverse childhood experiences, self-compassion, Intolerance of Uncertainty, and trauma psychopathology outcomes?

Results from the Pearson Correlation equation with the PCL-5 as the dependent variable, indicated a significant positive relationship between ACEs, the psychosocial variables of intolerance of uncertainty, attachment, adverse childhood experiences, and trauma psychopathology PTSD symptoms. Correlations summaries can be viewed in Table 4.

Table 4

Correlation Summary PCL-5 and Psychosocial Variables

	r PCL-5	Significance
Adverse Childhood Experiences	.415	<.001
Self-compassion	-.475	<.001
Intolerance of Uncertainty	.549	<.001
Anxiety	.553	<.001
Avoidance	.551	<.001

Research Question 2: Which psychosocial variable (Self-compassion, Intolerance of Uncertainty, or attachment style) contributes most to trauma psychopathology outcomes?

Results of the backward linear regression with PCL-5 as the dependent variable indicated that the anxious attachment dimension had the strongest relationship to the PCL-5 as compared to avoidant attachment dimension, ACEs, intolerance of uncertainty, and self-compassion. The correlations between anxious attachment dimension and trauma psychopathology, as measured by the PCL-5, was .553, indicating that the anxious attachment dimension corresponds to higher trauma psychopathology symptoms. In the backward regression model, all variables were retained in the full model, indicating higher anxiety dimension (R=.553, p=<.001), higher levels of intolerance of uncertainty (R=.549, p=<.001), lower levels of self-compassion (R= -.475, p= <.001), and higher instances of adverse childhood experiences (R=.415, p= <.001) had the most significant relationship with higher levels of trauma psychopathology. The regression summary can be viewed below in table 5. To determine the goodness of fit of the full model the R^2 was examined. As indicated in Table 5, the full model R^2 (R=.527) suggests a large effect size. In conducting the backward elimination regression, the restricted model (R= .520) suggests the difference in the two models was not statistically significant, and therefore the variable of self-compassion was removed from the full model due to low significance, which left 4 variables in the restricted model. The final F test was used to compare the full model (R^2= .527) and the restricted model (R^2= .520). This difference was not found to be significant (F=2.79, p= .097) therefore the restricted model will be used for this study.

Table 5

Regression Summary PCL-5 vs. Psychosocial Variables

Scale	Full Model [a]		Restricted Model [b]	
	Beta	Semi partial	Beta	Semi partial
Adverse Childhood Experiences	.242***	.309	.257***	.325

Self-compassion	-.133	-.154		
Intolerance of Uncertainty	.161	.170	.228*	.264
Anxious	.320***	.370	.345***	.398
Avoidant	.213**	.246	.205**	.234

Note *p<.05, **p<.01, *** p< .001
a- R^2= .527, F= 27.74, p= <.001
b- R^2= .520, F= 33.46, p= <.001

Summary

This study investigated the effects of the psychosocial variables of ACEs, self-compassion, attachment style, and intolerance of uncertainty on the relationship between early childhood adversity and adult psychopathology. Further, this study aimed to understand how the potential protective factor of self-compassion relates to psychopathology trauma outcomes. Results from this study indicated that psychosocial variables are significantly related to trauma psychopathology outcomes. Furthermore, there was a strong correlation between anxious attachment and high levels of trauma psychopathology.

Chapter 4

Discussion

This study aimed to determine the psychosocial variables contributing to trauma psychopathology outcomes in adults. Additionally, the researcher aimed to determine which psychosocial variable was the most correlating factor in trauma psychopathology outcomes. Results from the demographic questionnaire, Adverse Childhood Experiences Scale (ACES), Self-Compassion Scale (SCS), Intolerance of Uncertainty Scale (IUS-12), Relational Styles Questionnaire (RSQ), and the PTSD Checklist (PCL-5) will be discussed in this chapter.

Overview

Society is entrenched with complex experiences that impact people physically, emotionally, and psychologically. Research shows that a complex life experience, such as trauma, will most likely be experienced in a person's life (Nelson, 2019; other citations?). Experiences with trauma can have a lasting effect on all aspects of a person's life, and one area of significant concern is the parts unseen, the psychological impact (Sperry, 2016). Although trauma can be experienced in numerous ways, it is frequently defined as chronic and acute, with chronic experiences of trauma being linked to maladaptive behaviors, emotions, and beliefs (Musazzi et al., 2017). Further, one study has found that increased adverse traumatic childhood experiences can be linked to health concerns and chronic health conditions, such as heart disease and early death (Petruccelli et al., 2019).

While mental health stigma has decreased, barriers keep people from engaging in counseling to deal with the aftereffects of chronic and acute trauma experiences (Bradstreet, 2018). The outcomes of trauma can develop into psychopathological symptoms of PTSD (Jones & Cureton, 2014). Based on the Diagnostic Statistical Manual of Mental Health Disorders, Post

Traumatic Stress Disorder (PTSD) is located within the trauma and stressor-related disorders and has eight qualifying criteria (Regier et al., 2013). This criterion includes exposure to traumatic events, re-experiencing symptoms, avoidance symptoms, maladaptive thinking, arousal symptoms, symptomology lasting for at least one month, symptoms creating a marked impairment in the person's life, and those symptoms are not explained by any other medical or substance-induced illness. In addition, while hile symptomology may be present, a person may qualify for a diagnosis of subthreshold PTSD, which is reserved for those who do not meet the complete list of specifiers found in the DSM but are still presenting with significant symptomology.

While risk factors increase the likelihood of ongoing psychopathology linked to the trauma experience, a person may also experience mitigated effects of trauma based on protective factors (Powell et al., 2015). Protective factors are the internal and external resources, such as social and financial support, that, when faced with adverse experiences, enable and bolster a person's ability to adapt successfully (Powell et al., 2021).

Protective factors fall into four broad categories of individual, family, parental, and community protective factors (citation needed). An increase in protective factors is associated with more positive life outcomes (Powell et al., 2021). In addition, mental health professionals should consider psychosocial variables such as attachment, intolerance, and self-compassion in assessing and treating clients for trauma psychopathology symptoms (Rindt-Hoffman et al., 2019; Paltell et al., 2022; Moore et al., 2022).

The steady state of stress and uncertainty connected to the COVID-19 pandemic is linked with peoples' experiences of Acute Stress Disorder (ASD), defined as intrusive symptoms, negative mood, dissociation, avoidance, or arousal symptoms that occur within two days and do

not exceed four weeks (Stamu-O'Brien, 2020). In addition, due to the increase in trauma experiences associated with COVID-19 and other non-COVID-19 related experiences, all counselors will likely work with trauma at some point (Foreman, 2018). Therefore, counselors must understand the individual factors contributing to a person's trauma outcomes—specifically, the psychosocial factors such as ACEs, attachment, intolerance of uncertainty, and self-compassion.

There has been an established relationship between early childhood adversity and adult psychopathology (Felitti et al., 1998; Petruccelli et al., 2019; Bourassa et al., 2022). Therefore, the psychosocial mechanisms that contribute to adult psychopathology is important knowledge for clinicians to have in order to help clients consider how the psychosocial variables of ACEs, attachment style, IU, and self-compassion may contribute to psychopathology outcomes in adulthood. A significant finding of the current study was that the psychosocial variables of adverse childhood experiences, attachment style, intolerance of uncertainty, and self-compassion correlated to trauma psychopathology in adults. This finding is significant for clinicians because it indicates that people with low levels of self-compassion correlate to high trauma psychopathology in adulthood. Further, those with high levels of adverse childhood experiences and intolerance of uncertainty correlate to higher trauma psychopathology in adulthood. Moreover, in considering the two attachment dimensions of anxious and avoidant, an anxious attachment strongly correlates to higher trauma psychopathology in adults.

Previous research findings (Evans et al.,2013; Stevens et al., 2013: McCormick et al., 2017; Wilson & Newins, 2018) have asserted the importance of psychosocial mechanisms in the context of ACEs on the outcomes of trauma psychopathology in adulthood (Panagou, 2021). In a meta-analysis, Panagou (2021) found that in examining ACEs or childhood maltreatment on

mental health outcomes, there are deleterious effects on adult mental health, with significant findings concerning PTSD in adulthood (Berman et al., 2019). Further, adult attachment has been found to be a significant mediator of childhood trauma and adult psychopathology (Browne & Winkelman, 2007). This study further supports the literature that attachment is significantly correlated to adult trauma psychopathology. The findings from the current study contribute to the current research on the mechanisms of adult trauma psychopathology and the necessity of consideration of psychosocial factors in assessment and treatment.

The purpose of this study also included a focus on further defining which of the psychosocial variables contributed most to trauma psychopathology. The results of the four psychosocial variables, adverse childhood experiences, attachment style, intolerance of uncertainty, and self-compassion, indicated that those with anxious attachment were most significantly correlated to higher levels of trauma psychopathology. These findings are consistent with previous research studies (Nelson et al., 2019; Browne & Winkelman, 2007) on attachment style and their role in predicating adult trauma psychopathology. It has been long established that early experiences of trauma significantly determine attachment style (Bryant et al., 2017; Bowlby, 1988).

Further, that attachment style is predictive of trauma psychopathology in adulthood (Bryant et al., 2017; Boroujerdi et al., 2019; Woodhouse et al., 2015; Nelson et al., 2019; Browne & Winkelman, 2007). In a study conducted to determine a connection between a history of childhood abuse and attachment style, Boroujerdi et al. (2019) found that most of the participants in the study who had multiple suicide attempts had an insecure attachment style. Boroujerdi et al. (2019) assert that the increase in suicidal behavior to the combination of early maltreatment from a caregiver resulted in an insecure attachment style. Nelson et al. (2019)

found that attachment style was a significant mediator between childhood sexual abuse trauma and post-traumatic growth, with psychological outcomes of individuals with a secure attachment style strongly linked to post traumatic growth. A study that followed up with people 28 years after being exposed to a natural disaster as a child found that a brief separation from parents during trauma exposure significantly related to avoidant attachment styles and PTSD symptoms in adulthood (Bryant et al., 2017). Woodhouse et al. (2015) conducted a meta-analysis that found a fearful avoidant attachment style most strongly associated with PTSD symptoms. This has suggested that in the context of trauma experienced in childhood, within the attachment theory lens, shifts a person's internal working model (Browne & Winkelman, 2007), parental separation during trauma exposes children to the risk of adult psychopathology (Bryant et al., 2017) increased suicide attempts in adulthood (Boroujerdi et al., 2019), and indicates less likelihood of experiencing Post Traumatic Growth (Nelson et al., 2019). The shift in the internal working model is detrimental to the attachment system, potentially resulting in a cascade of developmental and relational issues throughout life (Browne & Winkelman, 2007). The results of this study parallel those of previous studies. Specifically, the results of this study demonstrated that an assessment of a person's attachment style corresponding to an anxious attachment might indicate adult trauma psychopathology.

Implications for Counselors and Counselor Educators

Counselor Training

The results of this study provide counselor educators and clinicians in the field with a pathway to educate, assess and treat trauma psychopathology. The current study found that an anxious attachment style, higher Intolerance of Uncertainty and ACEs score, and lower self-compassion are associated with higher PTSD symptoms. Findings from this study provide

educators with key focus topics to integrate into the curriculum to bolster counseling students' trauma-informed care with clients. Counselor educators aiming to increase a trauma-informed program will benefit from incorporating knowledge on the importance of assessment of client attachment styles, Intolerance of Uncertainty, ACEs, and lower levels of self-compassion. Specific recommendations include, the introduction of varies attachment questionnaires in assessment courses, the identification of the counselor trainees personal attachment styles, and a discussion and reflection of the implications of their particular attachment style on the therapeutic alliance. Further, after teaching the initial assessment of these psychosocial variables, proper conceptualizing of the impact on the therapeutic alliance and treatment planning interventions will aide students in conducting a trauma-informed approach with clients.

Counselor educators seeking to infuse attachment principles into their instruction may, introduction to the specific counseling skills that may signal therapeutic presence to clients, such as attunement and immediacy, and in turn increase the likelihood of creating a therapeutic alliance that provide a corrective emotional attachment experience for clients. Counselor educators may utilize the results of this study to buffer and prevent student burnout during didactic training and practicum and internship through the integration of knowledge concerning topics of trauma, attachment styles, self-compassion, and intolerance of uncertainty through student self-reflection. Further, supervisors and doctoral supervisors may find it beneficial to utilize the concepts of the wounded healer in helping supervises conceptualize the challenges faced when working with clients who have experienced trauma. Other potential benefits of integrating knowledge of these psychosocial factors into supervision would be to strengthen the counseling students' self-awareness, self-care, self-monitoring for burnout, and confidence in building therapeutic relationships. Based on the findings of this study, counselor education

programs should make it a high priority to review attachment assessment procedures in assessment and skills classes. Further, clearly defined attachment-based interventions should be brought to counseling student awareness, especially given the high rate of clients who have reported trauma experiences (Benjet et al., 2016).

Counseling Practice

Findings from this study provide clinicians with various psychosocial factors to consider when assessing and planning treatment for clients, as well as developing the therapeutic alliance. A possible assessment procedure for clinicians to utilize when working with clients may include an assessment of childhood adverse experiences, attachment style, intolerance of uncertainty, and self-compassion. This assessment procedure could inform treatment focus with clients. It has been shown that self-compassion may mediate the impact of trauma psychopathology as well as decreasing depression and anxiety (Woodfin et al., 2021; Moore et al., 2022). A counselor's assessment of self-compassion levels in clients who have experienced trauma will provide the counselor with further defined objectives for treatment. These objectives can focus on increasing client self-compassion levels to alleviate trauma psychopathology symptoms.

Being that the results of this study found that the anxious attachment style was most strongly correlated with trauma psychopathology counselors may benefit from assessing client attachment style. Further, the assessment of the attachment style may aid the counselor in making special considerations for how to strengthen the therapeutic alliance with clients who may struggle with relational attachment due to trauma experiences. Research and development of attachment-based interventions aimed at decreasing the dimensions of problematic anxiety and avoidance should be a priority for intervention researchers.

Limitations

Although the current study validates the previous literature and sheds light on the relationship between the psychosocial variables, including ACEs, self-compassion, attachment styles, and the intolerance of uncertainty, and trauma psychopathology there are some notable limitations in the study design and sample. First, results for this study were based on a survey design and the data from the non-responders to the survey cannot be compared to responders. Second, the sample is comprised of mostly white female college students (N= 106) which does not represent the general population. Further, this sample does not adequately reflect the diverse clientele who seek out counseling services. Additionally, the study had 15 responses from men and 1 response from LGBTQ students. Given the lack of diversity in the sample these results may not generalize to racial/ethnic sexual orientation minorities. Third, the instruments used in this study were self-report measures, which rely on self-disclosure and self-knowledge and potentially influenced by answering in a socially desirable way. Additionally, while the PCL-5 had high reliability future studies may benefit from using scales that isolate the specific symptomology, whereas the PCL-5 provides a measure of qualification for PTSD treatment. Finally, this study examined the psychosocial factors of ACEs, self-compassion, attachment style, and intolerance of uncertainty. While these were all significantly correlated to trauma psychopathology it does not account for other psychosocial factors that may contribute to the overall outcomes of people who have experienced trauma. Despite these limitations, the results of this study may provide counselors and counselor educators with key insights into psychosocial factors that may impact trauma psychopathology in clients.

Future Recommendations for Research

Future research on the psychosocial factors that contribute to trauma psychopathology in adults is needed to determine if there are a specific matrix of factors that contribute more to

trauma outcomes than others. With the establishment of an anxious attachment style as being the most strongly correlated with trauma psychopathology and self-compassion having an inverse relationship with trauma psychopathology it would be beneficial to further the understand how self-compassion may decrease trauma symptomology. Understanding the specific self-compassion behaviors that contribute to less severe trauma outcomes will help counselors target specific cognitive processes that may impede client healing.

This study utilized the PCL-5 to determine trauma psychopathology in adults. This scale provides an overall score, with a score of 31 and above signifying the client would benefit from PTSD treatment. This study found that people with low self-compassion is positively correlated to higher trauma psychopathology. Future research of the impact of the protective psychosocial factor of self-compassion on specific types of trauma experiences in childhood and adulthood is needed. Research to further define the specific types of adverse childhood experiences that correlate to a anxious attachment style is needed to help counselors working with children with early intervention procedures. Furthermore, intervention research focused on empirically validated interventions for increasing self-compassion, healing attachment trauma leading to a anxious attachment style in children and adults, and increasing a tolerance of uncertainty is necessary.

Conducting a qualitative study on the psychosocial factors would be beneficial for counselors and counselor educators. It is imperative to conduct a deeper examination of the behavioral patterns and cognitive processes that contributes to decreasing a person's trauma symptomology. This information would contribute to further defining the mechanisms of trauma as well as the mechanism of post traumatic growth.

Finally, this study focused on the four psychosocial factors of adverse childhood experiences, self-compassion, intolerance of uncertainty, and attachment styles. Further research examining how these psychosocial factors, in the absence of adverse childhood experiences, impact adult adverse experiences is needed to further define the pathway of how adverse childhood experiences determines trauma outcomes.

Conclusion

This research further defined the psychosocial factors, such as ACEs, self-compassion, intolerance of uncertainty, and attachment styles, that are related to trauma psychopathology in adults. This study determined that in the presence of adverse childhood experiences, low self-compassion, high intolerance of uncertainty, and an anxious attachment style is positively correlated to trauma psychopathology in adults. Further, the results indicated that out of these four psychosocial factors an anxious attachment style is most strongly related to trauma psychopathology in adults. Additional intervention research is needed with children and adults to determine effective treatment strategies for decreasing trauma psychopathology. Research on the psychosocial factors correlated to trauma psychopathology will provide a pathway for counselors in the field to heal the effects of trauma, as well as provide counselor educators and supervisors with the knowledge to equip counseling trainees who are working with traumatized clients.

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Chapter 5: Manuscript

Introduction and Background of the Problem

Society is entrenched with complex experiences that impact people physically, emotionally, and psychologically. Research shows that a complex life experience, such as trauma, will most likely be experienced in a person's life (Nelson, 2019). Experiences with trauma can have a lasting effect on all aspects of a person's life, and one area of significant concern is the parts unseen, the psychological impact (Sperry, 2016). Trauma can be experienced in numerous ways, but is mostly defined into two larger categories of chronic and acute, with chronic experiences of trauma being linked to maladaptive behaviors, emotions, and beliefs (Musazzi et al., 2017). Further, studies have found that increased adverse childhood experiences is linked to health concerns and chronic health conditions, such as heart disease and early death (Petruccelli et al., 2019). While mental health stigma has decreased there is still barriers that keep people from engaging in counseling to deal with the aftereffects of the chronic and acute trauma experiences (Bradstreet, 2018). Trauma has lasting effects and there can be serious impacts on a person's mental health including depression, anxiety, and PTSD (Jones & Cureton, 2014; Petruccelli et al., 2019).

Based on the Diagnostic Statistical Manual of Mental Health Disorders, Post Traumatic Stress disorder is located within the trauma and stressor related disorders and has eight qualifying criteria (Regier et al., 2013). This criterion includes exposure to traumatic event, re-experiencing symptoms, avoidance symptoms, maladaptive thinking, arousal symptoms, symptomology lasting for at least one month, symptoms creating a marked impairment in the person's life, and that symptoms are not explained by any other medical or substance induced illness. While symptomology may be present, a person may qualify for a diagnosis of

subthreshold PTSD, which is reserved for those who do not meet the full list of specifiers found in the DSM.

An experience with trauma, which is defined as, “any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings intense enough to have long lasting negative effect on a person’s attitudes, behavior, and other aspects of functioning.” (American Psychological Association (APA), n.d.), does not have the same impact from person to person. The factors influencing trauma outcomes if a compilation of unique risk and protective factors (Powell et al. 2021; Taylor et al., 2021). Risk factors may include the development of psychopathology, such as depression, anxiety, and PTSD (Taylor et al., 2021), epigenetic modifications (Mehta et al., 2022), relating to medical conditions such as Cardiovascular disease initiated by stress (Everson & Lewis, 2005; Sumner et al.2023), increased biological age (Jackson et al., 2003), relational dysfunction, maladaptive concept of self, and social isolation due to mistrust. These development of risk factors associated with trauma is more prevalent in people without a support system, multiple traumas, early adverse experiences, maladaptive coping systems, and certain personality traits (Mattson, 2018).

While risks factors increase the likelihood of ongoing psychopathology linked to the trauma experience, a person may also experience mitigated effects of trauma based on protective factors in their life (Powell et al., 2015). Protective factors are defined as, “Assets and resources within the individual, their life, and environment that facilitate the capacity for adaptation and bouncing back in the face of adversity” (Powell et al, 2021, p. 1439). Protective factors fall into four broad categories of; individual, family, parental, and community protective factors. An increase in protective factors in associated with more positive life outcomes (Powell et al., 2021). Psychosocial variables such as attachment, intolerance and self-compassion should be considered

by mental health professionals in their assessment and treatment of clients for trauma psychopathology symptoms (Rindt-Hoffman et al., 2019; Paltell et al., 2022; Moore et al., 2022).

The ongoing state of stress and uncertainty connected to the COVID-19 pandemic has been found to be linked with peoples' experiences of Acute Stress Disorder (ASD), defined as intrusive symptoms, negative mood, dissociation, avoidance, or arousal symptoms that occur within two days and do not exceed four weeks (Stamu-O'Brien, 2020). Considering the likelihood of someone experiencing trauma in their lifetime (Jones & Cureton, 2014) and the ongoing and persisting presence of COVID-19 there is an increase in psychological distress (Stephenson et al., 2022). Due to the increase in trauma experiences associated with COVID-19 and other non-COVID-19 related experiences it is likely that all counselors will work with trauma at some point (Foreman, 2018). It is imperative for counselors to understand the individual factors that contribute to a person's trauma outcomes. Specifically, the psychosocial factors such as ACE's, attachment, intolerance of uncertainty, and self-compassion.

Research Questions

The following questions define the purpose of this study:

1. What is the relationship between self-compassion, Intolerance of Uncertainty, attachment style, and adult trauma psychopathology outcomes?

3. Which variable (Self-compassion, Intolerance of Uncertainty, or attachment style) contributes most to trauma psychopathology outcomes?

Participants

The participants for this study were from Auburn University comprised of emerging adults who were enrolled as undergraduate and graduate students. Participants must have been over the age of 18 years old at the time data collection. Participants were surveyed using the Adverse Childhood Experiences Scale (ACES), Self-Compassion Scale, Relational Styles Scale,

Intolerance of Uncertainty Scale, and the PTSD Checklist (PCL-5) to identify those that had past experiences with trauma and the varying psychosocial factors that contribute to trauma outcomes. Those who had experiences with trauma were asked if they were enrolled as a student at a college or university in the timeframe of spring semester 2020 through spring semester of 2022. Those who were not enrolled at a college or university during that timeframe were directed to the end of their studies. Participants were recruited from undergraduate and graduate courses in the Special Education Counseling and Rehabilitation (SERC) department within the College of Education at Auburn University. A sample size estimate was conducted using the software G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) and assuming moderate effect sizes for the multiple regression with 5 predictors, and effect size of 0.15, statistical power of .80, and a p-value <.05 (Cohen, Cohen, West, & Aiken, 2003). A medium effect size was chosen in order to limit Type I and Type II errors while still yielding statistically significant results. The analyses yielded an estimate of 18.4 participants per condition or a total of 92 participants.

Procedures

The statistical procedure used to collect data for this study was a quantitative methods approach. After IRB approval the participants were recruited from undergraduate courses in the Special Education Rehabilitation and Counseling Department (SERC), and from the SONA platform. Participants were provided with a QR Code or Qualtrics link to an anonymous survey. Each participant was given the opportunity to review the informational letter on Qualtrics and consent to continue in the research study. This survey packet contained the following: a demographics survey developed by the researcher, measures including intolerance of uncertainty (Carleton, 2007), PTSD Checklist, Self-Compassion Scale (Neff, 2003), and Relationship Scale

Questionnaire (Griffin and Bartholomew, 1994). To maintain participant anonymity, the researcher turned off IP address collection through Qualtrics.

Data Analysis

This study utilized a quantitative approach with a survey method and a multiple regression design. This design was chosen in order to measure the existing relationship between the psychosocial variables of self-compassion, attachment styles, and intolerance of uncertainty with trauma outcomes. Predicator and criterion variables will be measured using the Adverse Childhood Experiences Scale (ACEs), Self-Compassion Survey (SCS), Relational Scales Questionnaire (RSQ), the Intolerance of Uncertainty Survey -12 item (IUS-12), and the PTSD checklist (PCL-5). All data for this study was collected online via a survey method utilizing a convenience sample of college students who are 18 or older from a large university in the Southeast.

Results

The purpose of this quantitative research study was to investigate the effects of the psychosocial variables of self-compassion, attachment style and intolerance of uncertainty on the relationship between early childhood adversity and adult psychopathology. Further, this study is aimed at understanding how the potential protective factor of self-compassion relates to the following factors of attachment style and Intolerance of Uncertainty. This research study aimed to examine the relationship between psychosocial differences and the mediation of trauma outcomes(psychopathology). The study was conducted to assess which of the variables of self-compassion, attachment style, and intolerance of uncertainty correlated with low levels of PTSD symptoms. The independent variables included self-compassion, attachment style, and adverse childhood experiences, while the dependent variable was PTSD symptoms, as measured by the

PCL-5. Multiple regression was used to determine if there is an overall significant relationship between the psychosocial variables and adult trauma psychopathology (research question 1). Additional backward regression was used to determine the most predicative variables to the dependent variable of adult trauma outcomes (research question 2).

Demographics

As reported in Table 1, a total of 134 people participated in the study. Of the 134 participants 123 participant data was included in the data analysis. A total of 13 cases were excluded for data analysis. A total of 13 responses were excluded due to incompletion of the research survey, with the cutoff being less than 85% complete. Out of 123 participants, 122 participants reported their gender; 15 (12.2%) participants indicated the identified as a man, 106 (86.2%) of the participants indicated they identified as a woman, and 1 person (.8%) identified as non-binary. Of the 123 participants, 122 indicated their current student status; 2 (1.6%) indicated they were freshman, 36 (29.3%) indicated they were sophomores, 36 (29.3%) indicated they were juniors, 28 (22.8%) indicated they were seniors, 6 (4.9%) indicated they were 5^{th}+ year senior, and 14 (11.4%) indicated they were graduate students.

COVID-19 related experiences are reported in Table 2. COVID-19 related experiences were reported by 122 participants. Of the 122 that reported, 87 (70.7%) report either having been sick or hospitalized or someone close to them being sick or hospitalized due to having COVID-19. Of the 122 that reported, 117 (95.1%) report either themselves or someone close to them having to quarantine due having COVID-19 symptoms. Of the 122 that reported, 117 (95.1%) report either themselves or someone close to them testing positive for COVID-19. Of the 122 that reported, 30 (24.4%) report that someone close to them died due to COVID-19 illness. Of the 122 that were reported, 43 (35%) report experiencing economic hardship due to COVID-19.

The mean, standard deviation, and reliability statistics are reported in Table 3 for the Adverse Childhood Experiences Scale (ACEs), Self-Compassion Scale (SCS), Relational Styles Questionnaire (RSQ), Intolerance of Uncertainty Scale (IUS-12), and the PTSD Checklist (PCL5).

Table 1

Demographic Information

Characteristic		N	Percentage
Enrolled in College or University spring 2020-spring 2022		123	100%
Gender	Male	15	12.2%
	Female	106	86.9%
	Non-Binary	1	.8%
Age	Over 18	123	100%
Race/Ethnicity	White	97	78.9%
	African American	14	11.4%
	Latinx/Hispanic	3	2.4%
	Asian American	3	2.4%
	Arab American	1	.8%
	Other	4	3.3%
Year in College	Freshman	2	1.6%
	Sophomore	36	29.3%
	Junior	36	29.3%
	Senior	28	22.8%
	5th year Senior	6	4.9%
	Graduate Student	14	11.4%

Instrumentation

Brief Demographic Measure

A demographic survey developed for the purposes of this study (Appendix C) and is focused on collecting demographic data, including gender, education, and race/ethnicity. Additional questions included experiences with COVID-19 exposure, loss, and trauma.

Adverse Childhood Experiences (ACEs)

The Adverse Childhood Experiences checklist, developed by Felitti (1998), is a ten item scale that assesses for past experiences of physical abuse, emotional abuse, sexual abuse, and household dysfunction (e.g. parental substance abuse, domestic violence, mental illness experienced by a parent(s)) prior to the age of 18. Respondents answer "yes" or "no" to whether they have experienced the adversity, with a total ACE score ranging from 0-10. The prevalence of respondents answering "yes" reflects greater experiences of childhood adversity. A score of four or above has been previously linked in the literature to negative health outcomes in adulthood (Felitti, 1998). In a study conducted by Ford et al. (2014) found Cronbachs Alpha indicated high internal consistency (.78) and test-retest reliability of r=.61.

Relationship Scale Questionnaire

The Relationship Scales Questionnaire (RSQ) was developed by Griffin and Bartholomew (1994) to measure four types of attachment styles: secure, fearful, dismissing, and preoccupied. The RSQ was designed to measure both the categorical styles (secure, preoccupied, dismissing, and fearful) and dimensional (avoidant and anxious) (Fraley, Hudson, Heffernan, and Segal, 2015) aspects of adult attachment. The RSQ is comprised of a total of 30 items each rated on a 5-point Likert scale. There are four groups of questions linked to the four different attachment styles. Once completed the RSQ provides participants with a score for each style of relating. The RSQ is a widely accepted scale to measure attachment in adults (Both & Best, 2017). The RSQ has demonstrated adequate internal reliability for the fearful subscale ($\alpha = .79$) and dismissing subscale scale ($\alpha = .64$) indicating that this instrument is a reliable measure of measure these two types of attachment. However, the reliability of the subscales Secure and Preoccupied are at a lower level of reliability (Cronbach's $\alpha = .32$ and .46) (Bäckström & Holmes, 2001). For the dimensional subscales, previous research (Roisman et al, 2007) reports

the RSQ has demonstrated adequate reliability for both dimensions, anxiety dimension (Cronbach's $\alpha = .81$) and avoidance dimension (Cronbach's $\alpha = .85$).

Intolerance of Uncertainty Scale (IUS)

The IUS (Intolerance of Uncertainty Scale) was developed by Carleton (2007) to measure the intolerance of uncertainty. The IUS is available in the standard version and the short version. The standard version has 27 items, and the short version has 12 items. Each item is rated on a 1 (Not at all characteristic of me) to 5 (Entirely characteristic of me) point Likert scale. A person's score can range from 12 to 60, with a higher score indicating a greater measure of intolerance of uncertainty. This study will utilize the IUS-12 short form with the two subscales of Prospective Intolerance of Uncertainty and Inhibitory Intolerance of Uncertainty. Prospective Intolerance of Uncertainty is conceptualized as, "a desire for predictability of future events, triggered by anxious apprehension about uncertainty, and prompting engagement in strategies to reduce uncertainty (Hong & Lee, 2015, p. 606). Inhibitory IU is conceptualized as the measure of "paralysis and impaired functioning arising from uncertainty" (Hong & Lee, 2015, p. 606). Prospective IU is associated with seven items (e.g., unforeseen events upset me greatly) and Inhibitory IU is associated with 5 items (e.g., uncertainty keeps me from living a full life) (Birrell et al., 2011). Previous research demonstrates that the IUS-12 has high internal consistency (Cronbachs $\alpha = .93$ for total score, Prospective IU subscale $\alpha = .90$ and Inhibitory IU subscale $\alpha = .90$) and a verified factor validity (Jacoby et al, 2013).

Self-compassion Scale

Neff (2003) developed a psychometric questionnaire entitled the Self Compassion Scale (SCS) to measure a person's overall self-compassion. As well as measuring a person's overall self-compassion the scale has six subscales. The subscales were: self- compassion, self-

judgement, common humanity, isolation, mindfulness and overidentification. The three positive subscales (self-compassion, common humanity, and mindfulness) correlate with the negative subscale (i.e., self-compassion versus self-judgement). This study will utilize the total overall compassion scale, with a higher score indicating greater levels of self-compassion. The SCS overall has demonstrated adequate internal reliability (Cronbach's alpha = .92), as well as the six subscales (ranging from Cronbach's α = .75 to .81) indicating that this instrument is a reliable measure of measure self-compassion (Neff et al., 2019). The construct validity of this measure has been reported as adequate Neff (include stats) (2019).

PTSD Checklist for the DSM-V (PCL-5)

The PTSD Checklist (PCL-5) is a self-report measure that assesses for PTSD symptoms corresponding to DSM-V criteria. It is a 20-item survey that is linked to the 20 PTSD symptoms in the DSM-V (Bovin et al., 2015). Respondents are asked to respond to each question, in reference to the last 30 days, using a 0-4 ranking scale. With the ranking of 0 corresponding to the statement "very little" to a ranking of 4 corresponding to "very often". A score is assigned based on adding up respondents' answers for a total score ranging from 0 to 80. Respondents scoring a 31 and above suggest the respondent be referred for evidence-based PTSD treatment (Bovin, 2015). A score lower than 31 may indicate subthreshold PTSD and client responses should be further included in the treatment planning process. Sample statements include: repeated disturbing dreams, avoiding memories, blaming yourself or someone else, and being super alert and watchful. The PCL-5 is a psychometrically sound instrument for determining the need for PTSD treatment (Blevins et al., 2015). In a validation study conducted by Blevins et al. (2015) high internal consistency (.94) was found. Additionally, in a study conducted by Bovin et al. (2015) found a high internal consistency (.96) and test-retest reliability of r=.84.

Research Question 1: What is the relationship between adverse childhood experiences, self-compassion, Intolerance of Uncertainty, attachment style, and trauma psychopathology outcomes?

Results from the Pearson Correlation equation with the PCL-5 as the dependent variable, indicated a significant positive relationship between ACEs, the psychosocial variables of intolerance of uncertainty, attachment, adverse childhood experiences, and trauma psychopathology PTSD symptoms. Correlations summaries can be viewed in Table 4.

Table 4

Correlation Summary PCL-5 and Psychosocial Variables

	r PCL-5	Significance
Adverse Childhood Experiences	.415	<.001
Self-compassion	-.475	<.001
Intolerance of Uncertainty	.549	<.001
Anxiety	.553	<.001
Avoidance	.551	<.001

Research Question 2: Which psychosocial variable (Self-compassion, Intolerance of Uncertainty, or attachment style) is correlated most to /contributes most to trauma psychopathology outcomes?

Results of the backward linear regression with PCL-5 as the dependent variable indicated that the anxious attachment dimension had the strongest relationship to the PCL-5 as compared to avoidant attachment dimension, ACE's, intolerance of uncertainty, and self-compassion.

The correlations between anxious attachment dimension and trauma psychopathology, as measured by the PCL-5, was .553, indicating that the anxious attachment dimension corresponds to higher trauma psychopathology symptoms. In the backward regression model, all variables

were retained in the full model, indicating higher anxiety dimension (R=.553, p=<.001), higher levels of intolerance of uncertainty (R=.549, p=<.001), lower levels of self-compassion (R= -.475, p= <.001), and higher instances of adverse childhood experiences (R=.415, p= <.001) had the most significant relationship with higher levels of trauma psychopathology. The regression summary can be viewed below in table 5. In order to determine the goodness of fit of the full model the R^2 was examined. As indicated in Table 5, the full model R^2 (R=.527) suggests a large effect size. In conducting the backward elimination regression, the restricted model (R= .520) suggests the difference in the two models was not statistically significant, and therefore the variable of self-compassion was removed from the full model due to low significance, which left 4 variables in the restricted model. The final F test was used to compare the full model (R^2= .527) and the restricted model (R^2= .520). This difference was not found to be significant (F=2.79, p= .097) therefore the restricted model will be used for this study.

Table 5

Regression Summary PCL-5 vs. Psychosocial Variables

Scale	Full Model [a]		Restricted Model [b]	
	Beta	Semi partial	Beta	Semi partial
Adverse Childhood Experiences	.242***	.309	.257***	.325
Self-compassion	-.133	-.154		
Intolerance of Uncertainty	.161	.170	.228*	.264
Anxious	.320***	.370	.345***	.398
Avoidant	.213**	.246	.205**	.234

Note *p<.05, **p<.01, *** p< .001.

c- R^2= .527, F= 27.74, p= <.001
d- R^2= .520, F= 33.46, p= <.001

Summary

This study was conducted to investigate the effects of the psychosocial variables of ACE's, self-compassion, attachment style, and intolerance of uncertainty on the relationship between early childhood adversity and adult psychopathology. Further, this study was aimed at understanding how the potential protective factor of self-compassion relates to psychopathology trauma outcomes. Results from this study indicated that psychosocial variables are significantly related to trauma psychopathology outcomes. Furthermore, there was a strong correlation between anxious attachment and high levels of trauma psychopathology.

Discussion

The purpose of this study was to determine the psychosocial variables that contribute to trauma psychopathology outcomes in adults. Additionally, the researcher aimed to determine which psychosocial variable was the most correlating factor in trauma psychopathology outcomes. Results from the demographic questionnaire, Adverse Childhood Experiences Scale (ACES), Self-Compassion Scale (SCS), Intolerance of Uncertainty Scale (IUS-12), Relational Styles Questionnaire (RSQ), and the PTSD Checklist (PCL-5) will be discussed in this chapter.

Overview

Society is entrenched with complex experiences that impact people physically, emotionally, and psychologically. Research shows that a complex life experience, such as trauma, will most likely be experienced in a person's life (Nelson, 2019). Experiences with trauma can have a lasting effect on all aspects of a person's life, and one area of significant concern is the parts unseen, the psychological impact (Sperry, 2016). Trauma can be experienced in numerous ways but is mostly defined into two larger categories of chronic and acute, with

chronic experiences of trauma being linked to maladaptive behaviors, emotions, and beliefs (Musazzi et al., 2017). Further, studies have found that increased adverse childhood experiences is linked to health concerns and chronic health conditions, such as heart disease and early death (Petruccelli et al., 2019).

While mental health stigma has decreased there are still barriers that keep people from engaging in counseling to deal with the aftereffects of the chronic and acute trauma experiences (Bradstreet, 2018). The outcomes of trauma can develop into psychopathological symptoms of PTSD (Jones & Cureton, 2014). Based on the Diagnostic Statistical Manual of Mental Health Disorders, Post Traumatic Stress disorder is located within the trauma and stressor related disorders and has eight qualifying criteria (Regier et al., 2013). This criterion includes exposure to traumatic event, re-experiencing symptoms, avoidance symptoms, maladaptive thinking, arousal symptoms, symptomology lasting for at least one month, symptoms creating a marked impairment in the person's life, and that symptoms are not explained by any other medical or substance induced illness. While symptomology may be present, a person may qualify for a diagnosis of subthreshold PTSD, which is reserved for those who do not meet the full list of specifiers found in the DSM.

An experience with trauma, which is defined as, "any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings intense enough to have long lasting negative effect on a person's attitudes, behavior, and other aspects of functioning." (American Psychological Association (APA), n.d.), does not have the same impact from person to person. The factors influencing trauma outcomes if a compilation of unique risk and protective factors (Powell et al. 2021; Taylor et al., 2021). Risk factors may include the development of psychopathology, such as depression, anxiety, and PTSD (Taylor et al., 2021),

epigenetic modifications (Mehta et al., 2022), increased biological age (Jackson et al., 2003), relational dysfunction, maladaptive concept of self, and social isolation due to mistrust. These development of risk factors associated with trauma is more prevalent in people without a support system, multiple traumas, early adverse experiences, maladaptive coping systems, and certain personality traits (Mattson, 2018).

While risks factors increase the likelihood of ongoing psychopathology linked to the trauma experience, a person may also experience mitigated effects of trauma based on protective factors in their life (Powell et al., 2015). Protective factors are the internal and external resources, such as social support and financial support, that when faced with adverse experiences enable and bolster a person's ability to successfully adapt (Powell et al, 2021).

Protective factors fall into four broad categories of: individual, family, parental, and community protective factors. An increase in protective factors is associated with more positive life outcomes (Powell et al., 2021). Psychosocial variables such as attachment, intolerance and self-compassion should be considered by mental health professionals in their assessment and treatment of clients for trauma psychopathology symptoms (Rindt-Hoffman et al., 2019; Paltell et al., 2022; Moore et al., 2022).

The ongoing state of stress and uncertainty connected to the COVID-19 pandemic has been found to be linked with peoples' experiences of Acute Stress Disorder (ASD), defined as intrusive symptoms, negative mood, dissociation, avoidance, or arousal symptoms that occur within two days and do not exceed four weeks (Stamu-O'Brien, 2020). Due to the increase in trauma experiences associated with COVID-19 and other non-COVID-19 related experiences it is likely that all counselors will work with trauma at some point (Foreman, 2018). It is imperative for counselors to understand the individual factors that contribute to a person's

trauma outcomes. Specifically, the psychosocial factors such as ACE's, attachment, intolerance of uncertainty, and self-compassion.

Discussion

Children have little power over the life circumstances that impact them negatively. Further, children may not have the developmental capacity to process the emotions and mental stress that can come along with early adversity experiences. While adults may have greater insight, awareness, and understanding of all the dynamics that have contributed to a situation, children are less likely to have the same level of insight and understanding due their less developed cognitive processes. While adults may rationally assess a situation and may be able to accurately assign responsibility to themselves and others involved in a situation, children may inaccurately assign responsibility to themselves or have an inaccurate assessment of early adversity experiences. Children who experience parental divorce blame their own actions for contributing to the family breakdown, physical, sexual, and mental abuse and neglect are misunderstood as happening to them based on their own volition. A common outcome of early childhood adversity is a shift in perception regarding themselves, other people, and the world. Over time, these ongoing mental and emotional experiences, even after adverse experiences have stopped, can influence a child's psychosocial experience. In the field of counseling there has been a trend of utilizing cognitive based therapies that focus on the present, with little emphasis on the client's previous adverse experiences. In cognitive behavioral therapy (CBT) there is the concept of core negative beliefs, yet these beliefs are not further considered or explored in the larger context of a person's story. Approaches such as psychodynamic therapy make strong considerations of early childhood experiences, child caretaker bond. More recently, in the field

of positive psychology the strength-based psychosocial variables, such as self-compassion, have been explored to understand the mechanisms that contribute to positive trauma outcomes.

There has been an established relationship between early childhood adversity and adult psychopathology (Felitti et al., 1998; Petruccelli et al., 2019; Bourassa et al., 2022). The psychosocial mechanisms that contribute to adult psychopathology is imperative knowledge for clinicians to have in order to help clients consider how the psychosocial variables of attachment style, Intolerance of Uncertainty, and self-compassion may contribute to psychopathology outcomes in adulthood. A significant finding of this study was that the psychosocial variables of adverse childhood experiences, attachment style, intolerance of uncertainty, and self-compassion contribute to trauma psychopathology in adults. This finding is significant for clinicians because it indicates that people who have low levels of self-compassion correlates to high trauma psychopathology in adulthood. Further, those who have high levels of adverse childhood experiences and intolerance of uncertainty correlates to higher trauma psychopathology in adulthood. Moreover, in considering the two attachment dimensions of anxious and avoidant, an anxious attachment is strongly correlated to higher trauma psychopathology in adults.

Previous research findings (Evans, Steel, & DiLillo, 2013; Stevens et al., 2013; McCormick et al, 2017; Wilson & Newins, 2018) have asserted the importance of psychosocial mechanisms in the context of ACE's on the outcomes of trauma psychopathology in adulthood (Panagou, 2021). In a meta-analysis Panagou (2021) found that in examining ACE's or childhood maltreatment on mental health outcomes that there are deleterious effects on adult mental health with significant findings in relation to PTSD in adulthood (Berman, Petretic & Bridges, 2019). Further, adult attachment as a significant mediator of childhood trauma and adult psychopathology (Browne & Winkelman, 2007) . This study further supports the literature that

attachment is significantly correlated to adult trauma psychopathology. Further, this study adds that when considering the psychosocial mechanisms of ACEs, self-compassion, intolerance of uncertainty, and attachment style, that an anxious attachment style was the most strongly correlated of all the psychosocial mechanisms measured. The findings from this study add to the current research on the mechanisms of adult trauma psychopathology and the necessity of consideration of psychosocial factors in assessment and treatment.

The second research question aimed to further define which of the psychosocial variables contributed most to trauma psychopathology. Of the four psychosocial variables adverse childhood experiences, attachment style, intolerance of uncertainty, and self-compassion, results indicated that those who have anxious attachment was most significantly correlated to higher levels of trauma psychopathology. These findings are consistent with previous research studies (Nelson et al., 2019; Browne & Winkelman, 2007) on attachment style and their role in predicating adult trauma psychopathology. It has been long established that early experiences of trauma significantly determine attachment style (Bryant et al., 2017; Bowlby, 1988).

Further, that attachment style is predictive of trauma psychopathology in adulthood (Bryant et al., 2017; Boroujerdi et al, 2019; Woodhouse et al., 2015; Nelson et al., 2019; Browne & Winkelman, 2007). In a study conducted to determine connection between history of childhood abuse and attachment style Boroujerdi et al. (2019) found that most of the participants in the study who had multiple suicide attempts had an insecure attachment style. Boroujerdi et al. (2019) asserts the increase in suicidal behavior to the combination of early maltreatment from a caregiver resulting in an insecure attachment style. Nelson et al. (2019) found that attachment style was a significant mediator between childhood sexual abuse trauma and post traumatic growth, with psychological outcomes of individuals with a secure attachment style strongly

linked to post traumatic growth. In a study that followed up with people 28 years after being exposed to a natural disaster as a child it was found that a brief separation from parents during trauma exposure in significantly related to avoidant attachment styles and PTSD symptoms in adulthood (Bryant et al., 2017). Woodhouse et al. (2015) conducted a meta-analysis that found a fearful avoidant attachment style to be the most strongly associated with PTSD symptoms. This has suggested that in the context of trauma experienced in childhood, within the attachment theory lens, shifts a person's internal working model (Browne & Winkelman, 2007), parental separation during trauma exposes children to risk of adult psychopathology (Bryant et al., 2017) increased suicide attempts in adulthood (Boroujerdi et al, 2019), and indicates less likelihood of experiencing Post Traumatic Growth (Nelson et al., 2019). The shift in the internal working model is detrimental to the attachment system potentially resulting in a cascade of developmental and relational issues throughout life (Browne & Winkelman, 2007). The results of this study parallel those previous studies. Specifically, the results of this study demonstrated that an assessment of a person's attachment style corresponding to an anxious attachment may indicate adult trauma psychopathology.

Implications for Counselors and Counselor Educators

Counselor Training

The results of this study provide counselor educators and clinicians in the field with a pathway to educate, assess and treat trauma psychopathology. The current study found that an anxious attachment style, higher Intolerance of Uncertainty and ACE's score, and lower self-compassion are associated with higher PTSD symptoms. Findings from this study provide educators with key topics of focus to integrate into the curriculum to bolster counseling's student's trauma informed care with clients. Counselor educators aiming to increase a trauma-

informed program will benefit from incorporating knowledge on the importance of assessment of client attachment styles, Intolerance of Uncertainty, ACE's, and lower levels of self-compassion. Further, after teaching on initial assessment of these psychosocial variables, proper conceptualizing of the impact on the therapeutic alliance and treatment planning interventions will aid students in conducting a trauma-informed approach with clients. Counselor educators may utilize the results of this study to buffer and prevent student burnout during didactic training and practicum and internship through the integration of knowledge concerning topics of trauma, attachment styles, self-compassion, and intolerance of uncertainty through student self-reflection. Further, supervisors and doctoral supervisors may find it beneficial to utilize the concepts of the wounded healer in helping supervisees conceptualize the challenges faced when working with clients who have experienced trauma. Other potential benefits of integrating knowledge of these psychosocial factors into supervision would be to strengthen the counseling student's self-awareness, self-care, self-monitoring for burnout, and confidence in building therapeutic relationships. Based on the findings of this study counselor education programs should make it a high priority to review attachment assessment procedures in assessment and skills classes. Further, clearly defined attachment-based interventions should be brought to counseling student awareness, especially given the high rate of clients who have reported trauma experiences (Benjet et al, 2016),

Counseling Practice

Findings from this study provide clinicians with various psychosocial factors to consider when assessing and planning treatment for clients, as well as developing the therapeutic alliance. A possible assessment procedure for clinicians to utilize when working with clients may include an assessment of childhood adverse experiences, attachment style, intolerance of uncertainty, and

self-compassion. This assessment procedure could inform treatment focus with clients. It has been shown that self-compassion may mediate the impact of trauma psychopathology as well as decreasing depression and anxiety (Woodfin et al., 2021; Moore et al., 2022). A counselor's assessment of self-compassion levels in clients who have experienced trauma will provide the counselor with further defined objectives for treatment that can focus on increasing client self-compassion levels as a means to alleviate trauma psychopathology symptoms.

Being that the results of this study found that the anxious attachment style was most strongly correlated with trauma psychopathology counselors may benefit from assessing client attachment style. Further, the assessment of the attachment style may aid the counselor in making special considerations for how to strengthen the therapeutic alliance with clients who may struggle with relational attachment due to trauma experiences. Research and development of attachment-based interventions aimed at decreasing the dimensions of problematic anxiety and avoidance should be a priority for intervention researchers. Further, clearly defined attachment-based interventions should be brought to counseling student awareness, especially given the high rate of clients who have reported trauma experiences (Benjet et al, 2016).

Limitations

Although the current study validates the previous literature and sheds light on the of the relationship between the psychosocial variables, including ACEs, self-compassion, attachment styles, and the intolerance of uncertainty, and trauma psychopathology there are some notable limitations in the study design and sample. First, results for this study were based on a survey design and the data from the non-responders to the survey cannot be compared to responders. Second, the sample is comprised of mostly white female college students which does not represent the general population. Further, this sample does not adequately reflect the diverse

clientele who seek out counseling services. Additionally, the study had 15 responses from men and 1 responses from LGBTQ students. Given the lack of diversity in the sample these results may not generalize to racial/ethnic sexual orientation minorities. Third, the instruments used in this study were self-report measures, which rely on self-disclosure and self-knowledge and potentially influenced by answering in a socially desirable way. Fourth, although the reliability of the RSQ was sufficient, the previous literature discusses the reliability of the subscales Secure and Preoccupied are at a lower level of reliability (Cronbach's α = .32 and .46) (Bäckström & Holmes, 2001), which is also reflected in this study. Additionally, while the PCL-5 had high reliability future studies may benefit from using scales that isolate the specific symptomology, whereas the PCL-5 provides a measure of qualification for PTSD treatment. Finally, this study examined the psychosocial factors of ACEs, self-compassion, attachment style, and intolerance of uncertainty. While these were all significantly correlated to trauma psychopathology it does not account for other psychosocial factors that may contribute to the overall outcomes of people who have experienced trauma. Despite these limitations, the results of this study may provide counselors and counselor educators with key insights into psychosocial factors that may impact trauma psychopathology in clients.

Future Recommendations for Research

Future research on the psychosocial factors that contribute to trauma psychopathology in adults is needed to determine if there are a specific matrix of factors that contribute more to trauma outcomes than others. With the establishment of an anxious attachment style as being the most strongly correlated with trauma psychopathology and self-compassion having an inverse relationship with trauma psychopathology it would be beneficial to further the understand how self-compassion may decrease trauma symptomology. Understanding the specific self-

compassion behaviors that contribute to less severe trauma outcomes will help counselors target specific cognitive processes that may impede client healing.

This study utilized the PCL-5 to determine trauma psychopathology in adults. This scale provides an overall score, with a score of 31 and above signifying the client would benefit from PTSD treatment. This study found that people with low self-compassion is positively correlated to higher trauma psychopathology. Future research of the impact of the protective psychosocial factor of self-compassion on specific types of trauma experiences in childhood and adulthood is needed. Research to further define the specific types of adverse childhood experiences that correlate to an anxious attachment style is needed to help counselors working with children with early intervention procedures. Furthermore, intervention research focused on empirically validated interventions for increasing self-compassion, healing attachment trauma leading to a anxious attachment style in children and adults, and increasing a tolerance of uncertainty is necessary.

Conducting a qualitative study on psychosocial factors would be beneficial for counselors and counselor educators. It is imperative to conduct a deeper examination of the behavioral patterns and cognitive processes that contribute to decreasing a person's trauma symptomology. This information would contribute to further defining the mechanisms of trauma as well as the mechanism of post traumatic growth.

Finally, this study focused on the four psychosocial factors of adverse childhood experiences, self-compassion, intolerance of uncertainty, and attachment styles. Further research examining how these psychosocial factors, in the absence of adverse childhood experiences, impact adult adverse experiences is needed to further define the pathway of how adverse childhood experiences determines trauma outcomes.

Summary

This research further defined the psychosocial factors, such as ACEs, self-compassion, intolerance of uncertainty, and attachment styles, that are related to trauma psychopathology in adults. This study determined that in the presence of adverse childhood experiences, low self-compassion, high intolerance of uncertainty, and an anxious attachment style are positively correlated to trauma psychopathology in adults. Further, the results indicated that out of these four psychosocial factors, an anxious attachment style is most strongly related to trauma psychopathology in adults. Additional intervention research is needed with children and adults to determine effective treatment strategies for decreasing trauma psychopathology. Research on the psychosocial factors correlated to trauma psychopathology will provide a pathway for counselors in the field to heal the effects of trauma, as well as provide counselor educators and supervisors with the knowledge to equip counseling trainees who are working with traumatized clients.

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Appendix A. IRB Approval

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2. Revised Documents
AUBURN UNIVERSITY HUMAN RESEARCH PROTECTION PROGRAM (HRPP)

EXEMPT REVIEW APPLICATION

For assistance, contact: **The Office of Research Compliance (ORC)**
Phone: **334-844-5966** E-Mail: **IRBAdmin@auburn.edu** Web Address:
http://www.auburn.edu/research/vpr/ohs

Submit completed form and supporting materials as one PDF through the IRB Submission Page
Hand written forms are not accepted. Where links are found hold down the control button (Ctrl) then click the link..

1. Project Identification Today’s Date: December 14, 2022

Anticipated start date of the project: January 11, 2022 Anticipated duration of project: 1 Year

1. **Project Title: The Effects of Self-Compassion, Attachment-styles, and Intolerance of Uncertainty on;**

   Trauma Outcomes

2. **Principal Investigator (PI): Joanna Collins Degree(s): M.S. Rank/Title: Graduate Student Department/School: Special Education, Rehabilitation, Counseling Role/responsibilities in this project: Research design, analysis and writing**
   Preferred Phone Number: 706-366-4439 AU Email: jmh0224@auburn.edu

   Faculty Advisor Principal Investigator (if applicable): Jamie Carney

   Rank/Title: Professor Department/School: Special Education, Rehabilitation, Counseling Role/responsibilities in this project: Supervise research design, analysis and writing

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Preferred Phone Number: **334-844-2885**

Department Head: Jeff Reese Preferred Phone Number: **344-844-7656**

AU Email: carnejs@auburn.edu

Department/School: Special Education, Rehabilitation, Counseling AU Email: rjr0028@auburn.edu

Role/responsibilities in this project: None identified at this time.

c. Project Key Personnel – Identify all key personnel who will be involved with the conduct of the research and

describe their role in the project. Role may include design, recruitment, consent process, data collection, data

analysis, and reporting. (To determine key personnel, see decision tree**).** *Exempt determinations are made by*

individual institutions; reliance on other institutions for exempt determination is not feasible. Non-AU personnel

conducting exempt research activities must obtain approval from the IRB at their home institution.

Key personnel are required to maintain human subjects training through CITI. Only for EXEMPT level research is

documentation of completed CITI training NO LONGER REQUIRED to be included in the submission packet.

NOTE however, **the IRB will perform random audits of CITI training records to confirm** reported training

courses and expiration dates. Course title and expiration dates are shown on training certificates

Name: Joanna Collins Degree(s): **M.S.**
Rank/Title: Graduate Student Department/School: Special Education, Rehabilitation, Counseling
Role/responsibilities in this project: **Primary Investigator, Design the research, build survey, recruit participants, ensure participants consent, collect the data, analyze the data, and report the data**
- AU affiliated? Yes No If no, name of home institution: Click or tap here to enter text.

- Plan for IRB approval for non-AU affiliated personnel? Click or tap here to enter text.
- Do you have any known competing financial interests, personal relationships, or other interests that could have

.

influence or appear to have influence on the work conducted in this project? Yes No
- If yes, briefly describe the potential or real conflict of interest: Click or tap here to enter text.
- Completed required CITI training? Yes No If NO, complete the appropriate CITI basic course and update

the revised Exempt Application form.
-IfYES,choosecourse(s)theresearcherhascompleted: HumanSciencesBasicCourse 5/24/2024

Hot Topics 5/24/2024

Name: Dr. Jamie Carney Degree(s): **PhD**
Rank/Title: Professor Department/School: Special Education, Rehabilitation, Counseling
Role/responsibilities in this project: Oversee research, committee chair
- AU affiliated? Yes No If no, name of home institution: Click or tap here to enter text.

- Plan for IRB approval for non-AU affiliated personnel? Click or tap here to enter text.
- Do you have any known competing financial interests, personal relationships, or other interests that could have

influence or appear to have influence on the work conducted in this project? Yes No
- If yes, briefly describe the potential or real conflict of interest: Click or tap here to enter text.
- Completed required CITI training? Yes No If NO, complete the appropriate CITI basic course and update

the revised EXEMPT application form.
- If YES, choose course(s) the researcher has completed: Refresher Course 8/3/2023

Refresher Course 8/3/2023

Name: None Degree(s): Click or tap here to enter text.
Rank/Title: Choose Rank/Title Department/School: Choose Department/School Role/responsibilities in this project: Click or tap here to enter text.
- AU affiliated? Yes No If no, name of home institution: Click or tap here to enter text.
- Plan for IRB approval for non-AU affiliated personnel? Click or tap here to enter text.
- Do you have any known competing financial interests, personal relationships, or other interests that could have

influence or appear to have influence on the work conducted in this project? Yes No
- If yes, briefly describe the potential or real conflict of interest: Click or tap here to enter text.
- Completed required CITI training? Yes No If NO, complete the appropriate CITI basic course and update

the revised EXEMPT application form.
- If YES, choose course(s) the researcher has completed: Choose a course

Choose a course

4. **Funding Source – Is this project funded by the investigator(s)? Yes**
   Is this project funded by AU? Yes No If YES, identify source Click or tap here to enter text.

   Is this project funded by an external sponsor? Yes No If YES, provide name of sponsor, type of sponsor (governmental, non-profit, corporate, other), and an identification number for the award.
   Name: Click or tap here to enter text. Type: Click or tap here to enter text. Grant #: Click or tap here to enter text.

5. **List other AU IRB-approved research projects and/or IRB approvals from other institutions that are associated with this project. Describe the association between this project and the listed project(s):**
   Click or tap here to enter text.

2. Project Summary
a. Does the study *TARGET* any special populations? Answer YES or NO to all.

Minors (under 18 years of age; if minor participants, at least 2 adults must
be present during all research procedures that include the minors) Yes No

No

Expiration Date Expiration Date

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Auburn University Students
Pregnant women, fetuses, or any products of conception
Prisoners or wards (unless incidental, not allowed for Exempt research) Temporarily or permanently impaired

Yes No Yes No Yes No Yes No

Yes No
If YES, to question 2.b, then the research activity is NOT eligible for EXEMPT review. Minimal risk means that the

b. Does the research pose more than minimal risk to participants?

probability and magnitude of harm or discomfort anticipated in the research is not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or test. 42 CFR 46.102(i)

c. Does the study involve any of the following? *If YES to any of the questions in item 2.c, then the research activity is NOT eligible for EXEMPT review.*

Procedures subject to FDA regulations (drugs, devices, etc.)

Use of school records of identifiable students or information from instructors about specific students.

Protected health or medical information when there is a direct or indirect link which could identify the participant.

Collection of sensitive aspects of the participant's own behavior, such as illegal conduct, drug use, sexual behavior or alcohol use.

d. Does the study include deception? Requires limited review by the IRB*

Yes No

Yes No

Yes No

Yes No Yes No

3. MARK the category or categories below that describe the proposed research. Note the IRB Reviewer will make the final determination of the eligible category or categories.

1 .

2. Research only includes interactions involving educational tests, surveys, interviews, public observation if at least ONE of the following criteria. (The research includes data collection only; may include visual or auditory recording; may NOT include intervention and only includes interactions). **Mark the applicable sub-category below (I, ii, or iii). 104(d)(2)**

(i) Recorded information cannot readily identify the participant (directly or indirectly/ linked); **OR**

- surveys and interviews: no children;
- educational tests or observation of public behavior: can only include children when investigators do not

participate in activities being observed.

(ii) Any disclosures of responses outside would not reasonably place participant at risk; **OR**

(iii) Information is recorded with identifiers or code linked to identifiers and IRB conducts limited review; no children. **Requires limited review by the IRB.***

3. Research involving Benign Behavioral Interventions (BBI)** through verbal, written responses including data entry or audiovisual recording from adult subjects who prospectively agree and ONE of the following criteria is met. (This research does not include children and does not include medical interventions. Research cannot have deception unless the participant prospectively agrees that they will be unaware of or misled

Research conducted in established or commonly accepted educational settings, involving normal

educational practices. The research is not likely to adversely impact students' opportunity to learn or

assessment of educators providing instruction. 104(d)(1)

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regarding the nature and purpose of the research) **Mark the applicable sub-category below (A, B, or C).** 104(d)(3)(i)

(A) Recorded information cannot readily identify the subject (directly or indirectly/ linked); **OR**
(B) Any disclosure of responses outside of the research would not reasonably place subject at risk;

OR

(C) Information is recorded with identifies and cannot have deception unless participants prospectively agree. **Requires limited review by the IRB.***

4. Secondary research for which consent is not required: use of identifiable information or identifiable bio-specimen that have been or will be collected for some other 'primary' or 'initial' activity, if one of the following criteria is met. Allows retrospective and prospective secondary use. **Mark the applicable sub-category below (i, ii, iii, or iv).** 104 (d)(4)

(i) Bio-specimens or information are publicly available;
(ii) Information recorded so subject cannot readily be identified, directly or indirectly/linked investigator does not

contact subjects and will not re-identify the subjects; **OR**

(iii) Collection and analysis involving investigators use of identifiable health information when us is regulated by HIPAA "health care operations" or "research" or "public health activities and purposes" (does not include bio-specimens (only PHI and requires federal guidance on how to apply); **OR**

(iv) Research information collected by or on behalf of federal government using government generated or collected information obtained for non-research activities.

5. Research and demonstration projects which are supported by a federal agency/department AND designed to study and which are designed to study, evaluate, or otherwise examine: (i)public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or service under those programs. (must be posted on a federal web site). 104.5(d)(5) (must be posted on a federal web site)

6. Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives and consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture. The research does not involve prisoners as participants. 104(d)(6)

***Limited IRB review – the IRB Chair or designated IRB reviewer reviews the protocol to ensure adequate provisions are in place to protect privacy and confidentiality.*

***Category 3 – Benign Behavioral Interventions (BBI) must be brief in duration, painless/harmless, not physically invasive, not likely to have a significant adverse lasting impact on participants, and it is unlikely participants will find the interventions offensive or embarrassing.*

**** Exemption categories 7 and 8 require broad consent. The AU IRB has determined the regulatory requirements for legally effective broad consent are not feasible within the current institutional infrastructure. EXEMPT categories 7 and 8 will not be implemented at this time.*

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4. Describe the proposed research including who does what, when, where, how, and for how long, etc. a. Purpose

The purpose of the present study is to explore the relationship between the impact of COVID-19 on adults who have varying levels of self-compassion, and intolerance of uncertainty, along with various styles of attachment. Further, this study is aimed at understanding how the potential protective factor of self-compassion relates to the following factors of attachment style, and Intolerance of Uncertainty.

b. Participant population, including the number of participants and the rationale for determining number of participants to recruit and enroll. Note if the study enrolls minor participants, describe the process to ensure more than 1 adult is present during all research procedures which include the minor.
Participant population: college students participants who are at least 18 years of age who were actively

enrolled starting from Spring term 2020 through Spring 2022 in a university or college program in the US is eligible for participation. Participants will be recruited from Auburn University and other institutions. The researcher seeks to have a minimum of 125 participants

c. Recruitment process. Address whether recruitment includes communications/interactions between study staff and potential participants either in person or online. *Submit a copy of all recruitment materials.*
Recruitment Process: will be recruited from Auburn University campus through flyers, SONA, Special

Education and Rehabilitation Counseling department classes, email, and social media invitations, undergraduate classes, graduate courses and course instructors. Undergraduate participants with the same criteria from other universities will be recruited via email and social media invitations (i.e. Twitter, Facebook, Instagram) and course instructors. The researcher will provide each participants with a QR code or Qualtrics link to an anonymous survey. Each individual will have an opportunity to participate in the research study after reviewing the information letter on Qualtrics and choosing to continue. This survey will ask about non-identifying demographics, adverse childhood experiences, self-compassion, attachment style, intolerance of uncertainty, and problems related to experiences with stress or trauma. In order to protect the identity of the participants these surveys will be completed through Qualtrics and will be anonymous.

d. Consent process including how information is presented to participants, etc.
The researcher will use an online information letter distributed through email. The email will provide the

participant with an overview of the study and the invitation letter populated on page 1 of the Qualtrics survey. If participants would like to participate in the study, they will read the information letter to give their consent before moving forward. The information letter will make it explicitly known that participation is voluntary, and they can quit the survey at any time without penalty. Once the participant gives consent, they will proceed with taking the survey that consists of a demographics survey developed by the researcher, measures including intolerance of uncertainty (Carleton, 2007), Adverse childhood experiences scale (Felitti et al., 1998), self-compassion scale (Neff, 2003), relationship assessment scale (Griffin and Bartholomew, 1994), and the PTSD Checklist 5 (Weathers et al., 2013). Due to the online nature of the survey, participants can complete the survey at a time that is convenient for them. Participants who want to opt-out of the study can do this by closing their web browser anytime.

e. Research procedures and methodology
This study will be conducted as a non-experimental quantitative research using an anonymous online

instrument. This is a voluntary research survey, and participants can opt-out at any time in the process without penalty. The population of interest includes undergraduate and graduate college students who were enrolled in a university starting Spring 2020 through Spring 2022. The researcher will utilize convenience sampling; therefore, the study will target Auburn University undergraduate and graduate

students. Further, Snowball sampling will be utilized; therefore consenting participants will be allowed to share this research opportunity with peers and potential participants.

In the Spring of 2023, the researchers will contact, via email, the College of Education and the Graduate School, and

other course instructors (e.g. Living and Communing in a Diverse Population, Career Orientation Exploration, Career

Success, Counseling and Human Services, Diversity and Exceptionality of Learners, Introduction to Prevention and

Mental Health Promotion) at Auburn University to inquire about their interest and ability to distribute information about the

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study to students at Auburn University. Upon instructors permission, the researcher will distribute recruitment flyers and email about this research opportunity, which will include a QR code linked to the study survey, to them so they can disseminate this information to their students. Participants who agree to participate in this research will be directed to a Qualtrics survey consisting of a demographics survey developed by the researcher, measures including intolerance of uncertainty (Carleton, Norton, Asmundson, 2007), adverse childhood experiences scale (Felitti et al, 1998), self- compassion scale (Neff, 2003), relationship assessment scale (Griffin and Bartholomew, 1994), and the PTSD Checklist 5 (Weathers et al., 2013). After the data is collected, descriptive statistics and Multiple Regression will be used to analyze the result via SPSS. Multiple regression will be used to investigate the relationships between the impact of trauma experiences on adults with consideration for various levels of self-compassion and intolerance of uncertainty, along with various styles of attachment. Next, the interaction effects will be examined to what extent self-compassion strengthens or weakens attachment style, and intolerance of uncertainty.

6. **Anticipated time per study exercise/activity and total time if participants complete all study activities. The entire study will take 20-30 minutes to complete.**
7. **Location of the research activities.**
   All research will be conducted via Qualtrics, and the survey can be completed in any location the participant has access to the internet.
8. **Costs to and compensation for participants? If participants will be compensated describe the amount, type, and process to distribute.**
   Participants will have the opportunity to opt in to be entered into a lottery to win a $25 gift card. There will be a total of 10 gifts cards that will be distributed to the winners. Upon completion of the survey participants will be directed to enter their email address to be notified if they have been selected to receive the $25 gift card.
9. **Non-AU locations, site, institutions. *Submit a copy of agreements/IRB approvals.* No other non- AU locations, site, or institutions will be used for data collection.**
10. **Describe how results of this study will be used (presentation? publication? thesis? dissertation?)**
    The results of this study will be used in the researcher's dissertation. Further, the results will be submitted for discipline-specific journal publication and presentations at regional and national conferences for related disciplines.
11. **Additional relevant information. None to report at this time.**

5. Waivers
Check applicable waivers and describe how the project meets the criteria for the waiver.

Waiver of Consent (Including existing de-identified data)
Waiver of Documentation of Consent (Use of Information Letter, rather than consent form requiring signatures)

Waiver of Parental Permission (in Alabama, 18 years-olds may be considered adults for research purposes)

https://sites.auburn.edu/admin/orc/irb/IRB 1 Exempt and Expedited/11-113 MR 1104 Hinton Renewal 2021-1.pdf

a. Provide the rationale for the waiver request.
The researcher is requesting a waiver of documentation of consent to keep participants anonymous. To keep their identities protected, participants will be directed to an anonymous Qualtrics survey. To protect the participant's

identity, the researcher does not want to see the signature on any consent forms. The attrition in the survey after reviewing the information letter will suffice.

6. Describe the process to select participants/data/specimens. If applicable, include gender, race, and ethnicity of the participant population.

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7. Risks and Benefits
7a. Risks - Describe why none of the research procedures would cause a participant either physical or

psychological discomfort or be perceived as discomfort above and beyond what the person would experience in daily life (minimal risk).

Participants will be asked to complete demographics and survey measures about their adverse childhood experiences, level of self-compassion, attachment style, intolerance of uncertainty, and PTSD symptoms checklist. Participants are not expected to experience any physical or psychological discomfort due to the nature of the information being collected. However, although not expected, universal risk associated with voluntary, anonymous survey participation may occur.

7b. Benefits – Describe whether participants will benefit directly from participating in the study. If yes, describe the benefit. And, describe generalizable benefits resulting from the study.

Undergraduate and graduate participants who are at least 18 years of age and who were actively enrolled starting

from Spring term 2020 through Spring 2022 in a university or college program in the US is eligible for participation.

Students who do not meet the age requirement or where not actively enrolled in a university during the time frame of

Spring term 2020 through Spring 2022 will be excluded from this study

The results of this study will provide how much college students' level of self-compassion, attachment style, and

intolerance of uncertainty affects the impact on their trauma outcomes. These results will be useful in understanding how

counselors and counselor educators can promote positive mental health outcomes after experiencing a traumatic event.

Based on these results, it is hoped that counselors and counselor educators will utilize interventions that increase self-

compassion. Ultimately, these results will illuminate how counselors and counselor educators can equip clients with better

mental health outcomes after traumatic experiences. Participants do not directly benefit from participating in this study.

8. Describe the provisions to maintain confidentiality of data, including collection, transmission, and storage. Identify platforms used to collect and store study data. *For EXEMPT research, the AU IRB recommends AU BOX or using an AU issued and encrypted device. If a data collection form will be used, submit a copy.*

Considerations have been made for the possibility of a confidentiality breach due to internet security issues resulting in Qualtrics being hacked. To protect to the identity of the participants, the data will be entered electronically into Qualtrics, and data analysis will be stored in a password-protected file on a password-protected computer. No identifying data will be collected in the study. All data is entered in an aggregate manner in which individuals will not be identified by their responses. Data will be encrypted in the researchers BOX account through Auburn University. Only Dr. Jamie Carney (faculty advisor) and the primary researcher will have access to the data in Box.

a. If applicable, submit a copy of the data management plan or data use agreement.

9. Describe the provisions included in the research to protect the privacy interests of participants (e.g., others will not overhear conversations with potential participants, individuals will not be publicly identified or embarrassed).

The research will have no way of identifying the participants based on their participation via Qualtrics. No identifying information will be collected for this study. All data is entered in an aggregate manner in which individuals will not be identifiable for their responses**.**

10. Does this research include purchase(s) that involve technology hardware, software or online services? YES NO

If YES:

1. **Provide the name of the product** Click or tap here to enter text.

and the manufacturer of the product Click or tap here to enter text.

2. **Briefly describe use of the product in the proposed human subject's research.**

   Click or tap here to enter text.

3. **To ensure compliance with AU's Electronic and Information Technology Accessibility Policy, contact AU IT Vendor Vetting team at vetting@auburn.edu to learn the vendor registration process (prior to completing the purchase).**
4. **Include a copy of the documentation of the approval from AU Vetting with the revised submission.**

11. Additional Information and/or attachments.

In the space below, provide any additional information you believe may help the IRB review of the proposed research. If attachments are included, list the attachments below. Attachments may include recruitment materials, consent documents, site permissions, IRB approvals from other institutions, data use agreements, data collection form, CITI training documentation, etc.

1. Email invitation 2. Recruitment Flyer 3. Student consent for online survey and information letter 4. Demographic Instrument 5. Adverse Childhood Experiences 6. Self-Compassion Scale, Revised 7. Relational Style Questionnaire 8. Intolerance of Uncertainty Scale 9. PTSD Checklist 5 (PCL-5)

Required Signatures *(If a student PI is identified in item 1.a, the EXEMPT application must be re-signed and updated at every revision by the student PI and faculty advisor. The signature of the department head is required only on the initial submission of the EXEMPT application, regardless of PI. Staff and faculty PI submissions require the PI signature on all version, the department head signature on the original submission)*

Signature of Principal Investigator:_____ **Date: 12/12/22**__

Signature of Faculty Advisor (If applicable):_ ____ **Date:**___**12/12/22**_

Jeff Reese, PhD Digitally signed by Jeff Reese, PhD **Date:**_____

Appendix B: Information Letter

AUBURN UNIVERSITY

COLLEGE OF EDUCATION

DEPARTMENT OF
SPECIAL EDUCATION, REHABILITATION, AND COUNSELING

INFORMATION LETTER
for a Research Study entitled
"The Effects of Self-Compassion, Attachment-styles, Intolerance of Uncertainty, on Trauma Outcomes "

You are invited to participate in a research study to understand the variables that impacted COVID-19 trauma outcomes. The study is being conducted by Joanna Collins, under the direction of Dr. Carney in the Auburn University Department of Special Education, Rehabilitation, and Counseling. You were selected as a possible participant because you have received counseling in the past year and are age 18 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to participate in a online Qualtrics survey. This online survey can be completed via your personal computer or phone. Your total time commitment will be approximately 30 minutes.

Are there any risks or discomforts? The risks associated with participating in this study are mental and emotional discomfort. To minimize these risks, we will provide adequate referrals to a counselor when requested. Due to the use of electronic devices there is a chance of a breach of confidentiality. All precautions will be taken to minimize the risks of a breach of confidentiality.

Are there any benefits to yourself or others? If you participate in this study, you can expect to offer information that will allow the investigator to help inform counselors of interventions and treatment for individuals who have experiences with trauma. We/I cannot promise you that you will receive any or all of the benefits described.

Will you receive compensation for participating? Participants will have the opportunity to be entered into a **lottery, where you will have the chance to win** _____.

Are there any costs? If you decide to participate, you will accrue no personal cost.

If you change your mind about participating, you can withdraw at any time during the activity. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether

or not to participate or to stop participating will not jeopardize your future relations with Auburn University or the Department of Special Education, Rehabilitation, and Counseling.

Participant Initials_____

Version Date (date document created): _____

Your privacy will be protected. Any information obtained in connection with this study will remain confidential Information obtained through your participation will be used to complete the Dissertation requirement.

If you have questions about this study, *please ask them now or* contact Joanna Collins at 706-366-4439 or email jmh0224@auburn.edu or the supervising faculty member Dr. Carney who can be contacted at carnejs@auburn.edu. A copy of this document will be given to you to keep.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO PARTICIPATE.

_____ _____

Participant's signature Date Investigator obtaining consent Date

---

_____

Printed Name Printed Name

Version Date (date document created): _____

Appendix C. Brief Demographic Measure

Demographics

I am 18 years of age or older.

a. Yes
b. No

How old are you in years? Please write two-digit numbers (ex: 25)

I identify as:

a. Man
b. Woman
d. Agender
e. Nonbinary
f. Transgender
g. Prefer not to say
h. Other _____

I am a:

a. Freshman
b. Sophomore
c. Junior
d. Senior
e. 5th + year Senior

Please specify your race/ethnicity. Please select all that apply.

a. Caucasian/White
b. African American
c. Latinx/Hispanic
d. Asian American
e. Arab American
f. Pacific Islander
g. Other (please specify)

Appendix D: COVID-19 Questionnaire

Q31 Have you or someone close to you been sick or hospitalized due to having COVID-19?

- ○ Yes (1)
- ○ No (2)

Q32 Have you or someone close to you had to quarantine because of having COVID-19 symptoms?

- ○ Yes (1)
- ○ No (2)

Q33 Have you or someone close to you tested positive for COVID-19?

- ○ Yes (1)
- ○ No (2)

Q34 Has anyone close to you died due to COVID-19 illness?

- ○ Yes (1)
- ○ No (2)

Q35 Have you experienced economic hardship due to COVID-19?

- ○ Yes (1)
- ○ No (2)

Appendix E: Adverse Childhood Experiences

Q20 While you were growing up, during your first 18 years of life:
Did a parent or other adult in the household often:
Swear at you, insult you, put you down, or humiliate you?

or Act in a way that made you afraid that you might be physically hurt?

- ○ Yes (1)
- ○ No (2)

Q21 While you were growing up, during your first 18 years of life:
Did a parent or other adult in the household often:

Push, grab, slap, or throw something at you?

or Ever hit you so hard that you had marks or were injured?

- ○ Yes (1)
- ○ No (2)

Q22 While you were growing up, during your first 18 years of life:
Did an adult or person at least 5 years older than you ever:

Touch or fondle you or have you touch their body in a sexual way?

or Try to or actually have oral, anal, or vaginal sex with you?

- ○ Yes (1)
- ○ No (2)

Q23 While you were growing up, during your first 18 years of life:
Did you often feel that:

No one in your family loved you or thought you were important or special?

or Your family didn’t look out for each other, feel close to each other, or support each other?

- ○ Yes (1)
- ○ No (2)

Q24
While you were growing up, during your first 18 years of life:
Did you often feel that:

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

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

- ○ Yes (1)
- ○ No (2)

Q25 While you were growing up, during your first 18 years of life:
Were your parents ever separated or divorced?

- ○ Yes (1)
- ○ No (2)

Q26 While you were growing up, during your first 18 years of life:
Was your mother or stepmother:

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

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

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

- ○ Yes (1)
- ○ No (2)

Q27 While you were growing up, during your first 18 years of life:
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

- ○ Yes (1)
- ○ No (2)

Q28 While you were growing up, during your first 18 years of life: Was a household member depressed or mentally ill or did a household member attempt suicide?

- ○ Yes (1)
- ○ No (2)

Q29 While you were growing up, during your first 18 years of life: Did a household member go to prison?

- ○ Yes (1)
- ○ No (2)

(Felitti et al., 1998)

Appendix F: Self-Compassion Scale

Self-Compassion Scale Short Form (SCS-SF)

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. Indicate how often you behave in the stated manner, using the following scale:

Almost never				Almost always
1	2	3	4	5

1. When I fail at something important to me I become consumed by feelings of inadequacy.
2. I try to be understanding and patient towards those aspects of my personality I don't like.
3. When something painful happens I try to take a balanced view of the situation.
4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
5. I try to see my failings as part of the human condition.
6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
7. When something upsets me I try to keep my emotions in balance.
8. When I fail at something that's important to me, I tend to feel alone in my failure
9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm disapproving and judgmental about my own flaws and inadequacies.
12. I'm intolerant and impatient towards those aspects of my personality I don't like.

Reference:
Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy*. 18, 250-255

Appendix G: Relational Styles Questionnaire

RSQ

Please read each of the following statements and rate the extent to which you believe each statement best describes your feelings about close relationships.

		Not at all like me		Somewhat like me		Very much like me
1.	I find it difficult to depend on other people.	1	2	3	4	5
2.	It is very important to me to feel independent.	1	2	3	4	5
3.	I find it easy to get emotionally close to others.	1	2	3	4	5
4.	I want to merge completely with another person.	1	2	3	4	5
5.	I worry that I will be hurt if I allows myself to become too close to others.	1	2	3	4	5
6.	I am comfortable without close emotional relationships.	1	2	3	4	5
7.	I am not sure that I can always depend on others to be there when I need them.	1	2	3	4	5
8.	I want to be completely emotionally intimate with others.	1	2	3	4	5
9.	I worry about being alone.	1	2	3	4	5
10.	I am comfortable depending on other people.	1	2	3	4	5
11.	I often worry that romantic partners don't really love me.	1	2	3	4	5
12.	I find it difficult to trust others completely.	1	2	3	4	5
13.	I worry about others getting too close to me.	1	2	3	4	5
14.	I want emotionally close relationships.	1	2	3	4	5
15.	I am comfortable having other people depend on me.	1	2	3	4	5
16.	I worry that others don't value me as much as I value them.	1	2	3	4	5
17.	People are never there when you need them.	1	2	3	4	5
18.	My desire to merge completely sometimes scares people away.	1	2	3	4	5
19.	It is very important to me to feel self-sufficient.	1	2	3	4	5

	Not at all like me		Somewhat like me		Very much like me
20. I am nervous when anyone gets too close to me.	1	2	3	4	5
21. I often worry that romantic partners won't want to stay with me.	1	2	3	4	5
22. I prefer not to have other people depend on me.	1	2	3	4	5
23. I worry about being abandoned.	1	2	3	4	5
24. I am somewhat uncomfortable being close to others.	1	2	3	4	5
25. I find that others are reluctant to get as close as I would like.	1	2	3	4	5
26. I prefer not to depend on others.	1	2	3	4	5
27. I know that others will be there when I need them.	1	2	3	4	5
28. I worry about having others not accept me.	1	2	3	4	5
29. Romantic partners often want me to be closer than I feel comfortable being.	1	2	3	4	5
30. I find it relatively easy to get close to others.	1	2	3	4	5

Appendix H: Intolerance of Uncertainty

Initials/ID #:_____

Date:_____

Intolerance of Uncertainty Scale - Short Form

(Carleton, Norton, & Asmundson, 2007)

Please circle the number that best corresponds to how much you agree with eac...

	Not at all characteristic of me	A little characteristic of me	Somewhat characteristic of me	Very characteristic of me	Entirely characteristic of me
1. Unforeseen events upset me greatly.	1	2	3	4	5
2. It frustrates me not having all the information I need.	1	2	3	4	5
3. Uncertainty keeps me from living a full life.	1	2	3	4	5
4. One should always look ahead so as to avoid surprises.	1	2	3	4	5
5. A small unforeseen event can spoil everything, even with the best of planning.	1	2	3	4	5
6. When it's time to	1	2	3	4	5

act, uncertainty paralyses me.					
7. When I am uncertain I can't function very well.	1	2	3	4	5
8. I always want to know what the future has in store for me.	1	2	3	4	5
9. I can't stand being taken by surprise.	1	2	3	4	5
10. The smallest doubt can stop me from acting.	1	2	3	4	5
11. I should be able to organize everything in advance.	1	2	3	4	5
12. I must get away from all uncertain situations.	1	2	3	4	5

Score:_____

Appendix I: PCL-5

PTSD Checklist 5 (PCL-5) (Weathers et al., 2013)

This questionnaire asks about problems you may have had after a very stressful experience involving actual or threatened death, serious injury, or sexual violence. It could be something that happened to you directly, something you witnessed, or something you learned happened to a close family member or close friend. Some examples are a serious accident; fire; disaster such as a hurricane, tornado, or earthquake; physical or sexual attack or abuse; war; homicide; or suicide. Below is a list of problems that people sometimes have in response to a very stressful experience. Keeping your worst event in mind, please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

	Not at all (0) (1)	A little bit (1) (2)	Moderately (2) (3)	Quite a bit (3) (4)	Extremely (4) (5)
Repeated, disturbing, and unwanted memories of the stressful experience? (1)	○	○	○	○	○
Repeated, disturbing dreams of the stressful experience? (23)	○	○	○	○	○
Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)? (22)	○	○	○	○	○
Feeling very upset when something reminded you of the stressful experience? (7)	○	○	○	○	○
Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)? (31)	○	○	○	○	○
Avoiding memories, thoughts, or feelings related to the stressful experience? (32)	○	○	○	○	○

Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)? (34)	○	○	○	○	○
Trouble remembering important parts of the stressful experience? (39)	○	○	○	○	○
Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)? (8)	○	○	○	○	○
Blaming yourself or someone else for the stressful experience or what happened after it? (9)	○	○	○	○	○
Having strong negative feelings such as fear, horror, anger, guilt, or shame? (10)	○	○	○	○	○
Loss of interest in activities that you used to enjoy? (11)	○	○	○	○	○

Feeling distant or cut off from other people? (12)	○	○	○	○	○
Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)? (13)	○	○	○	○	○
Irritable behavior, angry outbursts, or acting aggressively? (16)	○	○	○	○	○
Taking too many risks or doing things that could cause you harm? (17)	○	○	○	○	○
Being “superalert” or watchful or on guard? (19)	○	○	○	○	○
Feeling jumpy or easily startled? (20)	○	○	○	○	○
Having difficulty concentrating? (21)	○	○	○	○	○
Trouble falling or staying asleep? (30)	○	○	○	○	○