CHILDHOOD TRAUMA AND UNDERGRADUATE COLLEGE SUCCESS RATES: EXAMINING THE MEDIATING ROLES OF ANXIETY, SUBSTANCE USE, AND SELF-ESTEEM.

by

Keirsten Lipowski

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

Individuals who experience childhood trauma have profound, lasting repercussions on their psychological and physical well-being. This non-experimental correlational study's purpose is to evaluate if childhood trauma exposure predicts undergraduate college success rates for early adults. This study is designed to examine how the mediating factors of anxiety, substance use, and self-esteem are altered after childhood trauma exposure, ultimately influencing the ability to succeed in a college setting. Four research questions drove this study: (a) What is the relationship between the frequency of complex childhood trauma and college success rates?, (b) How does anxiety mediate the relationship between the frequency of complex trauma and college success rate?, (c) How does the rate of substance use mediate the relationship between frequency of complex trauma and college success rate?, and (d) How does the rate of self-esteem mediate the relationship between the frequency of complex trauma and college success rate? Participants were recruited from Liberty University's undergraduate student population. Data was collected via an online questionnaire and was analyzed using IBM SPSS statistics software. Significant findings indicate a negative correlational relationship between childhood trauma exposure and undergraduate academic success. It was also found that as drug use increased, college success decreased. Finally, it was found that self-esteem is a mediating factor between childhood trauma and undergraduate success rates. This research highlights the importance of implementing interventions to help individuals who have been exposed to childhood trauma succeed in an academic setting while also overcoming complex repercussions.

Keywords: childhood trauma, undergraduate success rates, anxiety, substance use, self-esteem, early adulthood

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Dedication

I want to dedicate this dissertation to my wonderful husband, Jeffrey Grover, I do not know if I would have completed this journey without your support. Your love, patience, and understanding have been a constant source of strength. Thank you for always being there for me.

I also dedicate this dissertation to my incredible parents, Peter and Deirdre Lipowski, who have always supported me in every aspect of my life. I am forever grateful for your love, wisdom, and continuous words of encouragement. I would not be the person that I am today without you.

To my dear Gammy, Patricia Seals, you have always been my rock, confidant, and biggest cheerleader. Thank you for your daily check-ins and for always supporting me – I DID IT!

Finally, I dedicate this research to my child who is due to be born any day now. Thank you for giving me the final bit of motivation I needed to finish. I hope that throughout your lifetime I make you proud and you grow to value knowledge as much as I do.

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I would like to thank my husband, parents, grandparents, and siblings for their love and support throughout my life and my educational journey. They have continued to celebrate my accomplishments and provide support and encouragement when it is most needed. I thank the rest of my family and friends for their continued support and reassurance throughout this process.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Childhood trauma is a major global societal problem that does not discriminate and can affect all communities. The prevalence of childhood trauma is alarmingly high, with more than two-thirds of children reporting experiencing a traumatic event by age 18 (American Psychological Association, 2008; Greenberg et al., 2018; Soleimanpour et al., 2017). The repercussions of childhood trauma can have a profound, lasting effect on an individual's psychological and physical well-being that requires distinct interventions to overcome (Douglas et al., 2019; Görg et al., 2019). Experiences during childhood layout the framework for how that individual will continue to develop throughout their lifetime (Novais et al., 2021). This study aims to discover how childhood trauma exposure can influence college success rates of young adults. In particular, this study will examine how the frequency of complex childhood trauma contributes to individual rates of anxiety, substance use, and self-esteem, which ultimately influences academic success rates during undergraduate studies.

Background

Complex Childhood Trauma

It was found that between 59.3-66.2% of children who experience childhood trauma will experience more than one form, which is also referred to as complex trauma (Connell et al., 2018; Kessler et al., 2010). There are many different ways a child can experience childhood trauma, including physical/emotional/sexual abuse, natural disasters, community violence, serious accidents, life-threatening illnesses, and the loss of a loved one (American Psychological Association, 2008). Complex childhood trauma leads to changes in functioning that might decrease the ability to cope with stressors resulting in psychological, physical, and behavioral

changes (Aas et al., 2016; Curran et al., 2021). In addition, as the rate of complex trauma experienced increases, so does the rate of psychosis symptoms (Kessler et al., 2010).

Childhood Trauma Psychological Repercussions

Experiencing childhood trauma can lead to diverse repercussions that can affect individuals throughout their lifetime. For example, traumatic childhood experiences are risk factors for developing mental disorders such as bipolar disorders (Aas et al., 2016), posttraumatic stress disorder (PTSD) (Connell et al., 2018; Curran et al., 2021; Riber, 2017), depression (Connell et al., 2018; Curran et al., 2021; Pham et al., 2021), anxiety disorders (Curran et al., 2021; Pham et al., 2021), schizophrenia spectrum disorders (Jansen et al., 2016), attention deficit hyperactivity disorder (Richard-Lepouriel et al., 2019), and borderline personality (Richard-Lepouriel et al., 2019). In addition, individuals who have experienced childhood trauma are more likely to report psychotic symptoms at age 12 compared to children with no traumatic event exposure (Arseneault et al., 2011). Conclusively, some of the repercussions can be explained by neurological changes that occur due to the stress stemming from childhood trauma exposure (Voineskos, 2020; Zhai et al., 2019). For example, an alteration to central serotonin (5-HTTLPR) is associated with a higher risk for aggressive behavior (Gorodetsky et al., 2016), and changes to the central nervous system contribute to the increase in depressive disorders (Jaworska-Andryszewska & Rybakowski, 2019). Another biological change occurs in the amygdala, which alters the threat-processing neural circuitry resulting in modifications to emotional engagement and fear response (Ross et al., 2021; Vaughan et al., 2021). It has also been found that biological alterations that occur after childhood trauma can be passed on to the next generation, resulting in offspring having higher rates of being premature and having low birth weights (Vågerö & Rajaleid, 2017). In addition, rates of profound lifelong repercussions have been found to be

elevated due to individuals being less likely to seek help after childhood trauma (Johnson & Menna, 2017).

Childhood Trauma Behavioral Repercussions

Problem behaviors after childhood trauma are thought to increase due to emotional dysregulation, dissociation, psychopathic traits, and internalization of feelings, which alters everyday actions (Hébert et al., 2018; Marshall et al., 2021; Roche et al., 2019; Wiehn et al., 2018). Childhood trauma has been found to impact how successful an individual is in a school setting due to the numerous repercussions that can emerge (Berger et al., 2021). A form of problem behavior that is very common after childhood trauma is increased substance use (Aas et al., 2016; Barnert et al., 2020; Carliner et al., 2016; Marks et al., 2022). Substance use was viewed as a coping mechanism for childhood trauma, especially by college-aged individuals (Curran et al., 2021; Forster et al., 2018). Another frequent adverse behavior is self-harm and suicidal behaviors, which are five times more likely to occur in individuals who had previous exposure to childhood trauma (Barnert et al., 2020; Gawęda et al., 2020; Thompson et al., 2019; Warrier & Baron-Cohen, 2019; Xie et al., 2018; Zatti et al., 2017). In addition, there is a link between childhood trauma and higher rates of aggression (Altintas & Bilici, 2018; Berger et al., 2021; Gorodetsky et al., 2016; Kerig, 2019; Malvaso et al., 2021; Schauss et al., 2019). In an effort to gain back some control in their life after childhood trauma, an individual may partake in abnormal eating patterns (Cassioli et al., 2022; Imperatori et al.,2016; Malecki et al., 2018) and risky sexual behaviors (Dillard & Beaujolais, 2019; London et al., 2017; Taylor et al., 2018). The reasoning behind the increased rates of adverse behavior may stem from individuals having decreased social functioning and less consideration of other individuals' perspectives after childhood trauma exposure (Hudson et al., 2021). Adverse behavior does not always emerge

immediately following childhood trauma exposure; individuals who experience trauma through abuse or neglect are at a much higher risk of exposing their children to the same trauma (Plant et al., 2018; Siverns & Morgan, 2019; Stepleton et al., 2018). Similarly, those who experience trauma through violence are more likely to engage in domestic violence as adults (Schauss et al., 2019).

College Success

Many factors can influence an individual's college success rate, and the repercussions experienced after childhood trauma can contribute to that. Beattie et al. (2018) discussed that rates of college enrollment have significantly increased over the past few decades, but unfortunately, only half who initially begin a bachelor's degree will finish it within six years. Often, when individuals have adverse behavioral traits, they will experience less success in an academic setting (Beattie et al., 2018). College success can be measured by examining an individual's commitment to education, self-management skills, interpersonal and social skills, academic success skills, and career planning skills (Harris & Sumbrunn, 2017).

Biblical View

A concept that is prevalent throughout the Bible is that God is present, even through our suffering, and we can use our trials and suffering to become closer to God (English Standard Version Bible, 2001, Peter 5:10). We often find ourselves wondering where God is during hard times, ultimately having our faith tested. This may be the case for many individuals after experiencing childhood trauma, but suffering should not allow questions to emerge about our loving God. Instead, we must experience the repercussions of sin while accepting that God is in control of all things, including his reasoning behind traumatic experiences. God even allowed Jesus to experience difficult times, resulting in Jesus questioning him while upset, but ultimately

bringing him closer to God (English Standard Version Bible, 2001, Matt 27:46). God is using the experience of childhood trauma and its repercussions to rely on the understanding that he will guide them through and present the opportunity to transform from the repercussions more closely into the image of Christ. The development of early interventions after childhood trauma is meaningful because it is a way to follow God's teaching to help those who are vulnerable while allowing them to grow through their sufferings.

Looking at childhood trauma through a biblical worldview, we must acknowledge that God's gift to us is children (English Standard Version Bible, 2001, Psalm 127:3). Children are blessings in our lives directly from God and providing them with support throughout their youth after experiencing something horrific is pivotal in following God's guidance. By examining the college success rates after childhood trauma, we can develop proper interventions to support individuals after trauma to be successful in academic settings. God would want us to help protect these children who experienced adversity during a time in their lives that is so essential for healthy development and growth. God has special care for those most vulnerable, who can easily suffer and become victimized (English Standard Version Bible, 2001, James 1:27). God is their protector, and we should do our best to follow that example.

Problem Statement

The problem is previous research has shown that the rate of children exposed to childhood trauma continues to increase, leading to lifelong psychological and physical repercussions (Greenberg et al., 2018; Soleimanpour et al., 2017). Exposure to childhood trauma can occur in many ways, including physical/emotional/sexual abuse, life-threatening illnesses, and the loss of a loved one (American Psychological Association, 2008). Childhood trauma is associated with many interpersonal and behavioral problems throughout life. Individuals who are

exposed to childhood trauma are at a much higher risk of developing mental disorders such as PTSD (Connell et al., 2018; Curran et al., 2021; Riber, 2017), depression (Connell et al., 2018; Curran et al., 2021; Pham et al., 2021), anxiety disorders (Curran et al., 2021; Pham et al., 2021), and bipolar disorders (Aas et al., 2016). Childhood trauma exposure also results in higher rates of adverse behaviors such as increased substance use (Aas et al., 2016; Barnert et al., 2020; Carliner et al., 2016; Marks et al., 2022), increased aggression (Altintas & Bilici, 2018; Berger et al., 2021; Gorodetsky et al., 2016; Kerig, 2019; Malvaso et al., 2021; Schauss et al., 2019), abnormal eating patterns (Cassioli et al., 2022; Imperatori et al.,2016; Malecki et al., 2018) and risky sexual behaviors (Dillard & Beaujolais, 2019; London et al., 2017; Taylor et al., 2018). It has been conclusively shown that exposure to multiple childhood trauma experiences, known as complex trauma, increases the risk of lifelong repercussions (Aas et al., 2016; Curran et al., 2021).

However, research has neglected to investigate whether the number of trauma exposures is positively associated with lower rates of college success for individuals 18-24 due to increased anxiety and substance use plus lower rates of self-esteem (Arria et al., 2020). While research has examined many effects experienced from childhood trauma, past studies have focused primarily on the development of mental health disorders (Aas et al., 2016; Connell et al., 2018; Curran et al., 2021; Jansen et al., 2016; Pham et al., 2021; Riber, 2017; Richard-Lepouriel et al., 2019) or adverse behaviors (Aas et al., 2016; Altintas & Bilici, 2018; Barnert et al., 2020; Berger et al., 2021; Carliner et al., 2016; Gorodetsky et al., 2016; Kerig, 2019; Malvaso et al., 2021; Marks et al., 2022; Schauss et al., 2019) without examining how these consequences can contribute to the difficulty of success during undergraduate studies due to these repercussions. Some research has examined the main effect of childhood trauma on school success (Arria et al., 2020; Baker et al,

2016), but there is a lack of information surrounding the pathways that may be responsible for this relationship.

This study will provide data on how rates of anxiety, substance use, and self-esteem may be mediating variables in the relationship between the frequency of childhood trauma and college success rates in early adults. There is an urgent need to identify the impact complex childhood trauma has on early adulthood college success rates (Duncan, 2000). This will allow an understanding of the full repercussions of childhood trauma and develop responsive early interventions that can help prevent the prevalence of lifelong consequences. This study seeks to fill a significant gap by providing data to understand how the lasting repercussions of childhood trauma can contribute to the difficulty of success during undergraduate studies.

Purpose of the Study

The purpose of this quantitative correlational research study is to examine the relationship between the frequency of complex childhood trauma experienced, rates of anxiety, substance use, and self-esteem, and undergraduate college success rates in early adulthood. The theory guiding this study is the contemporary trauma theory (CTT) (Herman, 1992). CTT helps explain how childhood trauma alters an individual's psychological and physical functioning, ultimately changing how they succeed in areas of their life (Herman, 1992). More specifically, CTT provides a conceptual foundation for understanding the impact trauma has on an individual's sense of self, often leading to the internalization of trauma, which results in a disturbance to the individual's psychosocial functioning and cognitive ability, ultimately altering performance in brain regions that control behavior and executive functioning (Goodman, 2017). This trauma-based theory recognizes that exposure to childhood trauma hinders development and predisposes the individual to negative repercussions later in life (Goodman, 2017). Thus, CTT's

trauma-based theories guide this research study. It will help in the inquiry of changes to an individual after childhood trauma exposure and changes in rates of anxiety, substance use, and self-esteem, which can alter an individual's ability to succeed during undergraduate college years.

Research Questions and Hypotheses

Research Questions

RQ 1: What is the relationship between the frequency of complex childhood trauma and college success rate, as measured by the relationship between scores on the Childhood Trauma Questionnaire and the Academic Success Inventory for College Students?

RQ 2: How does anxiety, as measured by the Generalized Anxiety Disorder 7-item, mediate the relationship between the frequency of complex trauma and college success rate?

RQ 3: How does the rate of substance use, as measured by the Alcohol, Smoking, and Substance Involvement Screening Test, mediate the relationship between frequency of complex trauma and college success rate?

RQ 4: How does the rate of self-esteem, as measured by the Rosenberg Self-Esteem Scale, mediate the relationship between the frequency of complex trauma and college success rate?

Hypotheses

H_a1: There will be a negative correlational relationship between the frequency of complex childhood trauma and college success rate. As the

frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease.

H_a2: After childhood trauma exposure, individuals will have a higher rate of anxiety which will contribute to lower college success rates.

H_a3: After childhood trauma exposure, individuals will have a higher rate of substance use which will contribute to lower college success rates.

H_a4: After childhood trauma exposure, individuals will have a lower rate of self-esteem which will contribute to lower college success rates.

Assumptions and Limitations of the Study

Assumptions

An assumption of this study is that all participants will answer the questionnaire honestly and are willing to share personal information. Another assumption is that the participant may believe the researcher wants a particular answer and give that rather than answer honestly. A way to help support the idea that participants will be completely honest is by reassuring the participants that their identity will remain anonymous throughout the entire study, especially when collecting demographic information. The act of ensuring the protection of the participant's identity will be completed by not asking any identifying questions that would allow answers to be connected to a particular person. The participant's identity will also be protected since the researcher will never come into direct contact with any of the participants. All these different factors will come together to support the participants truthfulness.

Another assumption of this study is that the experience of childhood trauma will alter the behavior that is seen throughout the lifetime, ultimately influencing other aspects of the

individual's life. After exposure to childhood trauma, it is assumed that the individual will have more difficulties resulting in a difference between them and their peers.

Limitations

A limitation that can arise from this study is the dependence on self-report questionnaires to gain all of the data from participants. Therefore, it is possible that because it will be self-disclosed that the information gathered is not entirely accurate and that participants may lean towards the more socially acceptable answer rather than being entirely truthful. Another limitation anticipated with this research design is that individuals may have a lot to manage being undergraduate students adapting to the demands of college life and will not want to participate since it will add to their responsibilities.

Delimitations

The first delimitation is that during this study, success rates during undergraduate studies will only be examined, not other levels of schooling beforehand, which can contribute to college success rates. The level of education and success experienced in high school and previous grades can contribute to how prepared an individual is to complete undergraduate studies. Also, the success rates in college can be influenced by many outside factors, which will not all be taken into account throughout this study. Some external factors that may contribute to academic success rates are an individual's IQ score, stress management, social skills, and family/peer support. In addition, rates of anxiety, substance use, and self-esteem can be influenced by other life factors, not just childhood trauma, which will not be examined throughout this study. The other delimitation of this study is that all participants will be from one college and have to be between 18 and 24 years old. In addition, all participants will be recruited through social media and have to be members of Facebook groups where the recruitment will be posted. The

participants being from a single Christian-based college, in a specific age range, and with access to certain Facebook groups, does not allow the results of this study to fully be generalized to the entire population.

Theoretical Foundations of the Study

Trauma, especially during childhood, has been acknowledged and defined in many ways over the years. Currently, childhood trauma is viewed as an event or multiple events experienced by the individual that is physically harmful, emotionally harmful, threatening, or overwhelming, resulting in lasting effects on the individual's psychological and physical well-being (Aas et al., 2016; American Psychological Association, 2008; Douglas et al., 2019; Curran et al., 2021; Goodman, 2017; Herman, 1992). A theoretical foundation that has been developed to help guide the way individuals are viewed after experiencing trauma is the contemporary trauma theory (CTT) (Herman, 1992; Mészáros, 2010). This theory helps to identify that after exposure to childhood trauma, individual repercussions are not a sign of weakness but instead, the individuals are psychologically and physically injured in need of proper interventions (Goodman, 2017; Herman, 1992; Mészáros, 2010). The conceptual foundation that is specified by CTT allows consideration of the biological, psychological, and social impacts of trauma on children lasting through adulthood (Goodman, 2017; Mészáros, 2010). CTT supports the understanding of childhood trauma's influence on brain functioning and development, therefore helping to explain why the relationship between childhood trauma and undergraduate college success rates may exist.

With this theory in mind, this study sets out to examine the lasting repercussions of childhood trauma that are contributing to individuals' ability to succeed in a college setting. The changes to individual rates of substance use, anxiety, and self-esteem are the mediating factors

between childhood trauma and college success rates that stem from the psychological damage of trauma, but these may be diminished if proper interventions are implemented. Therefore, it is a hope that this study will support the need for early interventions after childhood trauma exposure to support proper healing and growth throughout the individual's lifetime.

Definition of Terms

The following is a list of definitions of terms that are used in this study.

Anxiety – The body's natural response to stress; a state of fear, apprehension, or anticipation about perceived future events or threats (Craske & Stein, 2016).

Childhood trauma – A traumatic event experienced before the age of 18 that threatens injury, death, or the physical integrity of self or loved ones that causes fear, terror, or helplessness during occurrence (American Psychological Association, 2008).

College Success – An individual's commitment to education, self-management skills, interpersonal and social skills, academic success skills, and career planning skills (Harris & Sumbrunn, 2017).

Intervention – Action on the part of a psychotherapist to deal with the issues and problems of a client. The selection of the intervention is guided by the nature of the problem, the orientation of the therapist, the setting, and the willingness and ability of the client to proceed with the treatment (American Psychological Association, 2008).

Substance use – The use of a particular substance, drug, or alcohol which alters an individual's mental state (Degenhardt et al., 2018).

Self-esteem – An individual's overall sense of worthiness as a person (Schmitt & Allik, 2005).

Questionnaire – A method of data collection containing a series of items that reflect the aim of the research (Ponto, 2015).

Undergraduate student – A student at a college or university who has not received a first and especially a bachelor's degree (Merriam-Webster, n.d.).

Significance of the Study

Throughout the United States, millions of children have experienced childhood trauma leading to a need to fully understand the repercussions that follow this exposure (American Psychological Association, 2008; Greenberg et al., 2018; Greeson et al., 2014; Soleimanpour et al., 2017). This study will significantly bring forth knowledge to the field surrounding the repercussions experienced after childhood trauma and how those repercussions influence multiple factors of an individual's life for years to come. Although it is known that after experiencing childhood trauma, an individual's academic success is negatively impacted (Beattie et al., 2018; Blodgett & Lanigan, 2018), this study is unique because it will bring forth new knowledge surrounding the mediating factors that contribute to that relationship. Previous research has focused primarily on the behavioral repercussions that influence school success (Beattie et al., 2018) and childhood trauma's influence on success in early education (Blodgett & Lanigan, 2018); This study intends to fill that gap left by previous research through examining a different education level and the factors that contribute to the relationship between childhood trauma and school success rates.

The knowledge gained throughout this study can help organizations and universities understand the importance of implementing interventions that can help those who have experienced childhood trauma succeed in an academic setting while overcoming their lasting repercussions. The information shared from this research will provide a deeper understanding of how childhood trauma changes an individual's psychologically and physically functioning throughout their lifetime, ultimately changing how they succeed in areas of their life, especially

if early interventions are not implemented as supported by the Childhood Trauma Theory (Herman, 1992). It is essential to understand the lasting effects of childhood trauma in order to help individuals begin to overcome what was experienced and provide them the opportunity to succeed to their highest ability. This study will signify the importance of early interventions after childhood trauma exposure. Childhood trauma exposure may be the starting point of these repercussions, but those repercussions build upon themselves, becoming more extensive and potentially disastrous, contributing to the snowball effect influencing countless aspects of an individual's life. These individuals deserve the same opportunity to earn a degree towards the life they want to have, and with this study, hopefully, knowledge will be spread about why specific individuals may need extra support during their undergraduate studies.

Summary

In conclusion, this research study will help fill the knowledge gaps surrounding complex childhood trauma and undergraduate academic success. In particular, the aim of this study is to discover how the frequency of complex childhood trauma contributes to individual rates of anxiety, substance use, and self-esteem, which ultimately influences academic success rates during undergraduate studies. The stress of experiencing childhood trauma changes certain aspects of an individual's personality. It is essential to examine how those changes can influence the prevalence of adverse repercussions, which then affect other aspects of the individual's life. This study will also bring forth knowledge surrounding the importance of developing responsive early interventions to promote healthy healing after childhood trauma. Finally, it is a hope that this study will give reasoning as to why some individuals struggle to succeed throughout schooling and provide the opportunity to develop interventions that will support these individuals to succeed in a college setting.

Chapter 2 will examine previous literature relating to the variables within this study. This includes childhood trauma, anxiety, substance use, self-esteem, and undergraduate success rates. It also addresses childhood trauma, anxiety, substance use, self-esteem, and undergraduate success rates from a Christian worldview, emphasizing the Biblical basis for the study.

CHAPTER 2: LITERATURE REVIEW

Overview

This research study stems from previous literature surrounding the prevalence of repercussions that emerge after an individual experiences childhood trauma. The wide range of repercussions that an individual is at a higher risk of experiencing after childhood trauma exposure has been widely researched, providing an understanding that the experience of childhood trauma does alter an individual's psychological and physical functioning. The following literature review will examine previous literature that discusses the repercussions that emerge after childhood trauma and how that affects other aspects of the individual's life. In particular, this literature review will examine rates of complex trauma experienced and its contribution to rates of anxiety, substance use, and self-esteem. It will also discuss childhood trauma exposure's findings influencing undergraduate school success. This area of research is essential because undergraduate college students are in a critical transition period when they must balance a new level of academic performance with increased responsibility (Forster et al., 2018). The undergraduate years set the path for an individual's success throughout their lifetime, but this time period can be significantly influenced by previous experiences, especially when an individual has lasting repercussions from childhood trauma.

Description of Search Strategy

A search of literature was performed utilizing the Jerry Falwell online library at Liberty University, which includes the databases of APA PsycNET, EBSCO Quick Search, ProQuest, SAGE Premiere, and ScienceDirect during the year of 2022. In addition, Google Scholar was used to access additional literature surrounding the main themes of this study. The search terms that were utilized throughout the literature searches included the following, alone or in

combination with each other: anxiety, childhood trauma, college success, self-esteem, substance use, undergraduate students.

The literature search aimed to investigate the most relevant and recent pieces. Literature was only included if an English version of the text was available. To help narrow down the results, articles published more than 5 years ago were excluded from the literature review. The primary type of literature examined was peer-reviewed studies and articles. In addition, academic books and organizational publications relating to the search terms were examined. The search strategy for a Biblical review began with a word study surrounding similar keywords. This review also included articles addressing the impact of faith on trauma repercussions in any capacity.

Review of Literature

History and Prevalence of Childhood Trauma

By reaching adulthood, most individuals have previous exposure to childhood trauma (Greenberg et al., 2018; Soleimanpour et al., 2017). Childhood trauma has continued to be a significant social issue worldwide for countless years and was formally recognized as a major problem during the 1990s (Jones et al., 2020). Those who have faced trauma during childhood often find it exceptionally difficult to overcome their past without appropriate interventions since the traumatic event occurred during such a pivotal point in psychological and physical development (Jonson-Reid & Wideman, 2017). Childhood experiences are the groundwork for how individuals develop and mature throughout the rest of their lives (Novais et al., 2021). Findings suggest that lasting repercussions are increased after experiencing one form of childhood trauma since individuals are more likely to experience increased oppression through

other experiences with childhood trauma (Connell et al., 2018; Hébert et al., 2018; Kessler et al., 2010; Plant et al., 2018).

It has been discovered that psychological maltreatment is the most prevalent form of childhood trauma worldwide, with 76.6% of individuals exposed to trauma during childhood having at least one experience with this (Daemen et al., 2021). Those who have experienced psychological maltreatment have been exposed to emotional abuse or neglect (Daemen et al., 2021).

An individual's response to the stress of childhood trauma differs depending on the individual, but some reactions are seen more commonly among traumatized children (Curran et al., 2021). Some of these reactions are new fears, sleep disruption, separation anxiety, reduced concentration, anger, irritability, and a decrease in activity participation (Curran et al., 2021; Kerig, 2019; Voineskos, 2020). Childhood trauma is significant due to the developmental period during which it occurs (Altintas & Bilici, 2018; Hébert et al., 2018). Children who have experienced trauma are at a period in their lives when they mostly rely on others to support them and their growth, increasing their sense of helplessness (Jonson-Reid & Wideman, 2017).

Children exposed to childhood trauma cannot overcome and receive treatment for trauma by themselves and cannot leave the hostile environment unless someone steps in to help provide proper interventions (Jonson-Reid & Wideman, 2017). The lasting repercussions after childhood trauma exposure can stick with individuals throughout their lifetime, leading to behavioral and psychological changes (Douglas et al., 2019; Görg et al., 2019) that will be further examined throughout this chapter.

Mediating Factors of Repercussions Seen After Childhood Trauma

After exposure to childhood trauma, it is common for changes in the individual that contribute to the rate of repercussions seen throughout their lifetime (Curran et al., 2021; Kerig, 2019; Voineskos, 2020). Each experience of childhood trauma is different, meaning that each unique exposure results in various repercussions, and each person has their own capability to handle those resulting repercussions (Marks et al., 2022).

Furthermore, responses to trauma are unique to the individual, their environment, and their trauma circumstances, but some common factors emerge after childhood trauma (Marks et al., 2022). It has been found that impaired functioning, dysfunction, and poor personality development often stem from a history of unresolved trauma (Goodman, 2017). Childhood trauma often leads to a higher rate of dissociation that involves a disruption of normal functions of memory, perception, identity, consciousness, and motor control (Altintas & Bilici, 2018; Hébert et al., 2018). Repercussions after childhood trauma can be heightened due to dissociative symptoms such as a disconnection between thoughts, memories, and actions commonly occurring after trauma exposure (Altintas & Bilici, 2018).

In addition, it has also been found that after trauma, especially during childhood, it is common for individuals to have difficulties with emotional regulation contributing to the development of psychiatric disorders (Cassioli et al., 2022; Hébert et al., 2018). The rates of emotional dysregulation after childhood trauma contribute to an individual's ability to react to treatments; those with higher rates of emotional dysregulation have lower rates of success with psychotherapies, ultimately contributing to the rate of lasting repercussions (Cassioli et al., 2022).

As previously mentioned, the changes to an individual's psychological functioning after childhood trauma contributes to the rate of psychopathology (Hudson et al., 2021; Voineskos, 2020). Childhood trauma has been found to predict mental disorders and mental health difficulties even after controlling for sociodemographic factors (Altintas & Bilici, 2018; Voineskos, 2020; Xie et al., 2018). Childhood is a pivotal time for brain development, so exposure to trauma during this time leads to a wide array of cognitive changes (Voineskos, 2020).

Furthermore, cognitive neurodevelopmental research has found that children's experiences and interactions become rooted within their brain structure (Schauss et al., 2019). Ultimately, childhood trauma exposure will impact neurodevelopment during a critical growth period leaving a lasting impact on psychological and physical health outcomes (Schauss et al., 2019). After childhood trauma, an individual is at a much higher risk of experiencing PTSD, which has been found to contribute to higher rates of delinquent behavior (Kerig, 2019). The psychological changes that occur after childhood trauma contribute to various adverse outcomes, especially problem behaviors, but often specific problem behaviors will not manifest immediately and can continue to change over time (Roche et al., 2019).

Behavioral changes after childhood trauma have also been known to contribute to the repercussions seen throughout a person's lifetime (Connell et al., 2018). The behavior changes after childhood trauma exposure may be attributed to an increase in impulsivity; as childhood trauma exposure severity increases, so does the rate of impulsive behaviors (Richard-Lepouriel et al., 2019). After childhood trauma, an individual is more likely to participate in risky behavior, which ultimately will influence life experiences moving forward (Connell et al., 2018; Hébert et al., 2018). Experiential avoidance is widespread after childhood trauma as a way for individuals

to avoid internal experiences, such as thoughts, emotions, and memories, and instead partake in external adverse behaviors that allow avoidance of these experiences (Roche et al., 2019). The increase in risky behavior may be used as a coping strategy that provides short-term relief from the lingering unpleasant thoughts surrounding their childhood trauma (Roche et al., 2019).

Additionally, the increase in risky behavior may also be due to developmental issues, previous victimization, and altered perspective (Dillard & Beaujolais, 2019; Hudson et al., 2021). The experience of childhood trauma alters the way individuals perceive the world around them and how they view decisions that are made (Hudson et al., 2021). It is also believed that childhood trauma and risky behaviors relationship stem from the lasting effect trauma exposure has on an individual's emotional regulation and dissociation (Hébert et al., 2018). Those who have experienced childhood trauma will commonly experience a disruption to their sense of self, decreasing the individual's resilience rate and contributing to adverse experiences and behavioral change throughout adulthood (Douglas et al., 2019). In addition, individuals will often have a more difficult time forming and maintaining relationships with their peers after childhood trauma. One reason peer relationships can be strained is that after trauma exposure, individuals have a more challenging time considering other people's perspectives leading to peers feeling that their feelings are not respected (Hudson et al., 2021).

The comorbidity of the different mediating factors and changes after childhood trauma leads to many mental disorders and behavioral problems coexisting, contributing to the rate of repercussions experienced (Curran et al., 2021).

College Success

Undergraduate students come from a wide range of backgrounds with different skills, ambitions, and expectations, which can contribute to their ability to adjust to college life (Beattie

et al., 2018). In addition, individuals who have experienced childhood trauma may be at a disadvantage in navigating the transitional stage of entering college due to the lingering damaging effects on emotional and cognitive development from their trauma (Soleimanpour et al., 2017). Some behaviors influencing college success rates after controlling for socioeconomic status and high school GPA include self-efficacy, motivation, conscientiousness, persistence, time management, and study skills (Arria et al., 2020; Beattie et al., 2018). In addition, college success can be influenced by levels of anxiety and depression due to impacting an individual's ability to retain information (Arria et al., 2020).

Childhood trauma has been known to alter areas of an individual's brain, contributing to their ability to succeed in an academic setting (Ross et al., 2021). It has been found that childhood trauma alters the brain in a way that reduces activation in brain regions used for attention and cognitive control, ultimately contributing to difficulties in learning and being successful throughout schooling (Ross et al., 2021). The prefrontal cortex is very sensitive to stressful experiences and will be significantly impacted by exposure to childhood trauma (Kalia et al., 2021). It has been found that after childhood trauma, an individual's cognitive flexibility and ability to adjust behavior appropriately to the current environment is reduced, hindering their ability to succeed throughout the adjustment to beginning their undergraduate career (Kalia et al., 2021). As childhood trauma exposure increases, individuals are more likely to report a health problem that makes it more difficult for them to succeed in a school setting (Hinojosa et al., 2019). At the elementary school level, individuals exposed to childhood trauma had reduced memory functioning, delays in cognitive performance, lower academic performance, lower IQ scores, and lower reasoning abilities (Ross et al., 2021). At the high-school level, individuals who experienced childhood trauma were more likely to experience academic underachievement,

anti-social behaviors, disruptive classroom behavior, and school suspension (Berger et al., 2021). Overall, those exposed to childhood trauma are at a higher risk of repeating a grade at any level and an increased risk for learning issues due to trauma's impact on educational abilities (Soleimanpour et al., 2017). Due to the lasting repercussions of childhood trauma, individuals are more likely to have increased doctor and therapy appointments which have been found to increase the risk of poor academic performance or even dropping out due to missing classes for those appointments (Hinojosa et al., 2019).

Additionally, 48% of individuals who experience three or more childhood traumas have low engagement in school settings (Soleimanpour et al., 2017). These changes to an individual's academic functioning will continue to linger throughout their lifetime and contribute to the abilities seen when they enter the college level. After childhood trauma, teachers can often misinterpret an individual's trauma-related responses as being oppositive, inattentive, or unmotivated, which further hinders their academic success, school connectedness, and teacher relationships (Taylor et al., 2019). Higher rates of childhood trauma exposure have also been found to contribute to individuals reporting more difficulty managing their time in school settings (Hinojosa et al., 2019). As a way to help support individuals' academic performance after childhood trauma, it is essential to address the mental health concerns and lingering repercussions from their traumatic experiences to give them the best opportunity to succeed (Taylor et al., 2019).

After childhood trauma, an individual's sense of self is altered from the experience, which contributes to a decreased ability to connect with peers, ultimately resulting in another barrier towards academic success (Douglas et al., 2019). Furthermore, it has been found that the additional stress and developmental challenges experienced during this period may contribute to

the emergence of negative repercussions that have been dormant since childhood trauma exposure (Kerig, 2019). During the undergraduate college years, individuals encounter stressful situations and excessive academic workloads that are more than they have experienced in the past, making this time period unique and potentially overwhelming (Brogden & Gregory, 2019). It has been found that half of undergraduate students are exposed to a potentially traumatic event within their first year of college, which for those previously exposed to childhood trauma can bring back feelings from that previous trauma (Brogden & Gregory, 2019). Independent demographic factors also have an influence on college success after childhood trauma, with first-generation, male, and black students being at a higher risk of college failure after childhood trauma (Lecy & Osteen, 2022).

In addition, the experience of childhood trauma has been found to interfere with an individual's concentration and memory, leading to problems in this area which can also contribute to how they respond in a school setting (Riber, 2017). A factor that may help overcome childhood trauma's lasting repercussions on college success rates is resilience (Soleimanpour et al., 2017).

Furthermore, resilience is how an individual remains in control and calm when encountering a challenge which can help support the individual's school engagement throughout college (Soleimanpour et al., 2017). It has also been found that becoming involved in school activities or sports and participating in school clubs decreases the amount of school absenteeism and grade repetition (Crouch et al., 2021). Another factor that can be beneficial in overcoming the difficulties of undergraduate studies is family support (Crouch et al., 2021). It has been found that family acceptance and kinship support academic success (Crouch et al., 2021).

Although the direct impact of childhood trauma on college success through all mediating factors has not been widely examined, it has been found that after exposure, the ability to succeed in an academic setting is hindered by the lasting repercussions and neurological changes, but further research in this area is needed (Arria et al., 2020; Ross et al., 2021). In addition, academic success after childhood trauma is decreased, but the mediating factors contributing to this still need to be further studied (Connell et al., 2018).

Anxiety after Childhood Trauma

Childhood trauma is strongly associated with poor mental health, in particular higher rates of anxiety, persisting throughout an individual's lifetime (Curran et al., 2021). It has been found that 18.3% of individuals will suffer from an anxiety disorder in adulthood after childhood trauma exposure (Novais et al., 2021). Furthermore, the experience and amount of childhood trauma exposure have been found to be positively correlated with an individual's rate of anxiety disorder symptoms (Bruijnen et al., 2019; Pham et al., 2021). There is a difference between males and females regarding anxiety after childhood trauma; females are more sensitive to the effects of childhood trauma, leading to increased anxiety rates after exposure compared to males (Vaughan et al., 2021).

The increase in anxiety symptoms after childhood trauma can be partly due to changes to an individual's anterior insula and parietal cortex regions of the brain, which predict executive function ability and ability to cope with life stressors (Ross et al., 2021). Another area of the brain that is altered after childhood trauma is gray matter volume in the frontal lobe brain areas (Song et al., 2020). Gray matter volume in an individual's left middle frontal gyrus is inversely correlated with the number of anxiety symptoms experienced (Song et al., 2020). In addition, the experience of multiple childhood traumas has been found to cause prolonged activation of

stress response systems and increased overactive cortisol hormone, which ultimately results in toxic stress to the developing brain and prolonged anxiety reaction (Schauss et al., 2019). Cortisol reactivity increases the rate of avoidance behaviors seen after childhood trauma, leading to more fear responses and ultimately helping to explain the higher rates of social anxiety (Bruijnen et al., 2019).

Another reason anxiety may linger for years into adulthood after childhood trauma is that the trauma is not fully resolved (Marks et al., 2022). When trauma is not resolved, the body continues to make stress hormones to protect itself, and those hormones keep circulating while the emotional responses to the trauma keep getting replayed, resulting in increased anxiety (Marks et al., 2022). Furthermore, it has also been found that anxiety may increase after childhood trauma exposure due to individuals having an increasingly more difficult time regulating emotions, leading to heightened negative affect such as anxiety and irritability (Ross et al., 2021). It has also been found that the maladaptive processing of traumatic memories increases the individual's anxiety levels (Vaughan et al., 2021). The maladaptive cognitive emotion regulation strategies that have been found to be increasingly utilized after childhood trauma mediates the relationship with increased anxiety symptoms (Tong et al., 2022). Also, affective lability, or an individual's proneness of frequent fluctuations of effect in response to external events, influences anxiety levels (Aas et al., 2017). After childhood trauma, an individual is more prone to rapidly shift from a normal emotional state to a state of anxiety under less stressful events, which may explain affective lability being a mediating factor between childhood trauma and anxiety disorders (Aas et al., 2017). In addition, the behavioral inhibition system has been found to be altered after childhood trauma exposure resulting in the inhibition of goal-oriented behavior, which can be linked to higher rates of anxiety (Bruijnen et al., 2019).

Overall, the prevalence of anxiety after childhood trauma is considered an internalization symptom from their previous traumatic experience that often goes unnoticed compared to other external repercussions, ultimately decreasing the likelihood of proper interventions (Taylor et al., 2019).

An individual's family structure contributes to the lasting repercussions seen after childhood trauma regarding their anxiety symptoms (Tong et al., 2022). Family conflict throughout childhood and adolescents has been found to lead to high rates of anxiety during adulthood (Tong et al., 2022). In contrast, high parental income and education levels are protective factors against exposure to childhood trauma, ultimately preventing the prevalence of trauma repercussions and high anxiety rates later in life (Tong et al., 2022). Overall, this contributes to the knowledge that an individual's family system is an essential social aspect that influences psychological development during childhood and adolescence, contributing to repercussions seen throughout adulthood (Tong et al., 2022).

Different forms of trauma can lead to varying rates of anxiety after childhood trauma, with anxiety being most strongly correlated with physical abuse (Pham et al., 2021). In addition, sexual abuse is another form of trauma that has been positively associated with higher rates of anxiety symptoms (Tong et al., 2022). After exposure to physical childhood trauma, individuals often will constantly worry that another traumatic event will occur or wait for something terrible to happen to them, which can also lead to an increase in anxiety (Riber, 2017). When encountering a situation similar to the childhood trauma that was endured, individuals' long-term conditioned responses to the previous event will be initiated (Schauss et al., 2019). Thus, the intense emotions and stress experienced will be reactivated by future stressful situations increasing the automatic reaction of fear and anxiety (Schauss et al., 2019). The experience of

childhood trauma leading to increased anxiety rates has also been found to alter how an individual views oneself or their self-esteem (Kascakova et al., 2020); the changes to an individual's self-esteem after childhood trauma will be examined in further detail later in this chapter.

Anxiety levels of undergraduate students have been found to influence their ability to succeed in a college setting (Brogden & Gregory, 2019). Transitional periods and all the changes to occur along with life transitions have been found to heighten the anxiety that individuals experience, ultimately contributing to their ability to succeed in their new setting (Syed Sheriff et al., 2020). It has been found that college students who were exposed to three or more traumatic situations during childhood had much higher rates of anxiety which ultimately makes the college experience more difficult (Brogden & Gregory, 2019). One form of anxiety that influences college students is test anxiety, their fear of failing while comparing their results to their classmates (Brogden & Gregory, 2019). Another way anxiety affects undergraduate students is through difficulties with everyday classroom activities, such as feeling that they are unable to sit through the entire lecture without shutting down (Brogden & Gregory, 2019). Undergraduate students who experience increased anxiety due to changes in their behavioral inhibition system are known to have less goal-oriented behavior, which ultimately will affect their success in a college setting (Bruijnen et al., 2019).

Substance Use After Childhood Trauma

After childhood trauma, it is common that substance use will be present throughout adolescence and adulthood as a coping mechanism for the feelings that have been internalized from their trauma (Barnert et al., 2020; Cabanis et al., 2021; Curran et al., 2021; Forster et al., 2018; Goodman, 2017; Kerig, 2019; Novais et al., 2021; Vaughan et al., 2021). It has been found

that as the number of childhood trauma experiences increases for an individual, the rate of their substance use also increases (Connell et al., 2018; Forster et al., 2018; Rasmussen et al., 2018; Zhang et al., 2020). Furthermore, between 60-90% of individuals who suffer from a substance use disorder have a history of childhood trauma (Vaughan et al., 2021). After childhood trauma, 84% of individuals show a positive association with addictive behaviors (Setién-Suero et al., 2020). In addition, females are more likely to develop a substance use disorder later in life after childhood trauma exposure (Vaughan et al., 2021).

Looking deeper into how different forms of childhood trauma led to different outcomes, it has been found that individuals who were exposed to physical neglect in childhood are at a significantly higher risk of participating in risky drinking (Wiehn et al., 2018). In addition, individuals who were exposed to emotional abuse during childhood are at a significantly higher risk of participating in drug abuse (Wiehn et al., 2018). It has also been found that individuals diagnosed with substance use disorder have a higher rate of previous exposure to childhood emotional, physical, and sexual abuse as well as physical neglect (Rasmussen et al., 2018; Zhang et al., 2020). Furthermore, 38% of individuals who are diagnosed with substance use disorder have been found to experience emotional abuse compared to 6.5% of the general public; 36% have been found to experience physical abuse compared to 6.6% of the general public; 31% have been found to experience sexual abuse compared to 7.6% of the general public; 32% of individuals have been found to experience physical neglect compared to 22.4% of the general public (Zhang et al., 2020).

Individuals who engage in increased substance use after childhood trauma are often utilizing the avoidant function of substance engagement to avoid their inner thoughts and memories relating to the trauma (Roche et al., 2019). After childhood trauma, the development

of increased substance use is linked to being a coping strategy but also a pattern of repeating dysfunctional family behaviors that were prevalent by parents or another caregiver when the childhood trauma occurred (Cabanis et al., 2021). Increased substance use during adulthood, particularly co-occurring, has been known to be a mechanism used to forget the pain caused by childhood trauma exposure (Cabanis et al., 2021). The increase in dissociation after childhood trauma can also help to explain the increase in substance use after childhood trauma (Hoktem et al., 2021). Through dissociation, individuals exposed to childhood trauma compartmentalize emotions from that event since they do not have the proper cognitive capacity to process those emotions (Hoktem et al., 2021). Unprocessed emotions are a stress factor for individuals, and when dissociation is used, long-term chronic substance use may be used as an effort to calm the emotions (Hoktem et al., 2021).

Changes to an individual's brain structure after childhood trauma exposure may help explain the increase in substance use in the following years (Setién-Suero et al., 2020). Childhood trauma exposure can be considered the first impact on an individual's stress response and neurotransmitter systems that influence brain vulnerability for a second impact, such as increased substance use during adolescence and young adulthood, which continues to alter cognitive frameworks (Setién-Suero et al., 2020). In addition, childhood trauma exposure has been found to increase the dysfunction of the hypothalamic pituitary adrenal axis (Cabanis et al., 2021). Furthermore, it has been found that after childhood trauma, there can be a change to an individual's behavioral activation system, which is linked to higher rates of impulsivity, ultimately contributing to more substance use (Bruijnen et al., 2019). A reason behind an individual's heightened impulsivity leading to increased substance use can be partly linked to a decrease of gray matter volume within the right precentral gyrus section within the frontal lobe

areas of the brain (Song et al., 2020). Finally, the stress caused by early life exposure to childhood trauma changes morphological brain function and gene expressions which alter an individual's susceptibility to becoming dependent on substance use, ultimately increasing the development of substance use disorder (Cabanis et al., 2021).

Alcohol has been found to be the most common substance used by individuals after childhood trauma in order to cope with their lasting repercussions (Vaughan et al., 2021). Those who are undergraduate college students are at a higher risk of substance use and misuse (Forster et al., 2018), but excessive substance use, in particular alcohol, worsens the adverse effects on school success (Vaughan et al., 2021). Research has discovered that alcohol and substance use are significant barriers to college success after trauma exposure (Hinojosa et al., 2019). Experimentation with substances is at its peak during young adulthood, significantly heightened for those dealing with underlying trauma, increasing exposure to complex concurrent adversities, which contributes to difficulties succeeding in areas of life (Cabanis et al., 2021). For example, after exposure to just one traumatic experience in childhood 14.6% of undergraduate students feel that alcohol hinders their academic success, with that percentage jumping to 28.3% for those who experienced more than 5 childhood traumas (Hinojosa et al., 2019). In addition, after exposure to just one traumatic experience in childhood 18% of undergraduate students feel that other substance use has hindered their academic success, with that percentage jumping to 32.6% for those who experienced more than 5 childhood traumas (Hinojosa et al., 2019). Interestingly, individuals tend to self-medicate with drugs and alcohol to cope with their preexisting mental disorders, but it has also been found that substance use and substance use disorders increase the rate of psychotic episodes (Degenhardt et al., 2018).

Furthermore, when trying to receive treatment for substance abuse, childhood trauma has also been found as an independent risk factor for relapse among adolescents and young adults (Goodman, 2017). It has also been found that once an individual partakes in substance use after childhood trauma exposure, they are at a higher risk of additional traumatic experiences due to engaging in risky behaviors while under the influence (Kerig, 2019). These risky behaviors include substance use in a situation that can cause injury, getting in trouble with the police because of substance use, and driving under the influence (Kerig, 2019). Although vast knowledge has shown that substance use after childhood trauma leads to high personal, social, and economic costs (Cabanis et al., 2021), there is a lack of research that looks directly and primarily at substance use being one of the mediating factors on the relationship between childhood trauma and college success outcomes which the study hopes to do.

Self-Esteem After Childhood Trauma

Childhood trauma changes the degree to which individuals experience emotions such as guilt, shame, disgust, fear, helplessness, and acceptance, resulting in most individuals suffering from lower self-esteem after trauma exposure (Görg et al., 2019). Self-esteem has been found to have a substantial positive predictive influence on phycological functioning and continued growth throughout an individual's life (Li et al., 2022). Conversely, childhood trauma has been found to have a lasting negative effect on an individual's self-esteem (Ozakar Akca et al., 2021). In addition, personality characteristics, such as attachment styles, can be gravely altered after the experience of childhood trauma (Barnum & Perrone-McGovern, 2017). These changes to an individual’s personality influence how the individual understands their environment, therefore, impacting the trauma recovery process and overall subjective thoughts of oneself (Barnum & Perrone-McGovern, 2017). Overall, these findings support the idea that how individuals perceive

their lives and environment influences how individuals feel about themselves (Barnum & Perrone-McGovern, 2017).

Furthermore, it has been found that the relationships and social expectations established in the first years of life set the foundation for how we form relationships later in life (Barnum & Perrone-McGovern, 2017). These social expectations include relationship guidelines and how an individual views themselves in relation to others (Barnum & Perrone-McGovern, 2017). It has been found that after childhood trauma, an individual will experience lower rates of secure attachment and higher rates of fearful attachment, ultimately influencing their rates of self-esteem throughout their lifetime (Liu et al., 2018). Furthermore, childhood trauma exposure negatively impacts how individuals interpret relationships affecting relationship attachments later in life and contributing to self-image in the sense of confidence and security (Liu et al., 2018). While encountering different forms of childhood trauma, particularly abuse and neglect, it is common that the individual will experience being rejected, exploited, denied, or ignored by those close to them, which adds to their feelings of self-rejection and lower self-esteem (Yoon et al., 2019). In contrast, high psychological flexibility, independence, cognitive quality, and adaptability protect individuals from the risk of adverse experiences safeguarding their self-esteem (Li et al., 2022). This protection is believed to occur because those with those psychological traits use more adaptive strategies, coping mechanisms, and emotional regulation during and after exposure to traumatic events (Li et al., 2022).

Continuing to examine the repercussions of the different forms of childhood trauma, it is found that self-esteem outcomes can also be influenced by trauma type. Physical childhood abuse has been found to interfere with an individual's feelings of worthiness and autonomy, ultimately contributing to lower self-esteem (Riber, 2017). In addition, emotional childhood

abuse contributes to the individual feeling unwanted, unworthy, and undignified, which also reduces the individual's self-esteem (Riber, 2017; Yoon et al., 2019). Specifically, as rates of emotional abuse increased, rates of self-esteem decreased, leading to a higher depressive outlook on life and oneself (Yoon et al., 2019). In addition, after experiencing childhood trauma in the form of emotional parental verbal abuse, an individual is more likely to have a lasting negative impact on their self-esteem and thoughts about oneself (Kascakova et al., 2020). These changes may be attributed to the devaluing, hurtful words that leave an overwhelming lasting impact on the individual (Kascakova et al., 2020). In addition, emotional abuse is more elusive, resulting in fewer chances of early interventions (Kascakova et al., 2020). Those who have experienced any form of childhood trauma have been found to have low-level social support, which may also help to understand why self-esteem is altered after childhood trauma (Xie et al., 2018).

An individual's self-esteem is a vital protective factor that allows an individual to develop resilience towards adverse experiences, such as childhood trauma and stressful events, such as beginning an undergraduate program (Pohl et al., 2021). However, the experience of childhood trauma enhances dysfunctional self-invalidating thoughts leading to an increase in emotional dysfunction and ultimately hindering the development of an individual's positive self-esteem (Pohl et al., 2021). Furthermore, after childhood trauma, it has been found that decreased rates of self-esteem increase the individual's risk of developing adult psychopathology while experiencing lingering repercussions from their cognitive changes (Daemen et al., 2021). Thus, building up aspects of an individual's self-esteem after childhood trauma exposure can help prevent the development of psychological disorders later in life (Daemen et al., 2021). Interestingly, although childhood trauma exposure impedes an individual's self-esteem, it has also been found that an individual's self-compassion, or the ability to be kind to oneself, can

alleviate the negative repercussions of childhood trauma and support self-esteem growth (Barlow et al., 2017).

Self-esteem after childhood trauma influences an individual's ability to succeed in an academic setting (Brogden & Gregory, 2019). For example, it has been found that college students exposed to 3 or more traumatic experiences have lingering thoughts that they won't be able to succeed or deserve college success (Brogden & Gregory, 2019). In addition, self-esteem can influence college success because individuals who doubt their self-worth are less likely to ask for help from professors or other campus staff (Brogden & Gregory, 2019). Furthermore, the decrease in self-esteem after childhood trauma causes individuals to be less able to secure resources (Clark et al., 2021) which could help these individuals succeed in an academic setting and prevent further oppression throughout their lifetime. In addition, once individuals are exposed to advocacy interventions to increase their self-esteem and ability to access community resources, it is found they have a higher quality of life (Clark et al., 2021). It has also been found that after childhood trauma, an individual's low rates of self-esteem lead to higher depressive symptoms (Yoon et al., 2019), which make it more difficult for the individual to succeed in a school setting.

Although there is some research surrounding self-esteem changes being a lasting repercussion after childhood trauma, there is a lack of studies examining self-esteem as a mediating factor (Yoon et al., 2019), and rarely any that connect the relationship to lower rates of student success.

Interventions after Childhood Trauma

After trauma exposure, many individuals seeking help will encounter the complex system that is in place for receiving support from healthcare resulting in a decrease in receiving

appropriate help (Barnert et al., 2020; Curran et al., 2021). Although it is known that childhood trauma can be extremely damaging long term, it is very distressing for individuals seeking help when there are barely any guidelines for early identification and intervention with no national standardized monitoring existing (Cabanis et al., 2021). These individuals would greatly benefit from treatment and help, but the behavioral healthcare system is commonly fragmented, leading to a more significant burden for those after trauma (Barnert et al., 2020). Unfortunately, many providers also have limited perspectives of the complex repercussions that emerge after trauma exposure adding to the barriers to individuals receiving the help needed and lacking ways to combat the presence of lifelong repercussions (Barnert et al., 2020).

Interventions can benefit individuals after trauma exposure by ensuring that behavioral health providers have a deeper understanding of how the lasting repercussions influence other areas of their lives and deliver trauma-informed, personalized victim-centered care (Barnert et al., 2020). The spread of knowledge about childhood trauma and trauma-informed frameworks, especially to teachers, can significantly influence school outcomes for students after childhood trauma exposure (Blodgett & Lanigan, 2018). Recovery after childhood trauma can be reinforced by teachers' support and understanding of the trauma process (Blodgett & Lanigan, 2018). Trauma training for teachers has been known to increase early referrals of traumatized students, improve school engagement, reduce disruptive behaviors, and decrease PTSD, but the majority of teachers do not receive trauma training and are unaware of trauma's influence on school success (Blodgett & Lanigan, 2018).

After childhood trauma, it has also been found that due to the complexity of coexisting repercussions, individuals are less likely to respond well to pharmacotherapy (Curran et al., 2021). Thus, it is imperative to spread knowledge on the mediating factors that contribute to a

lifetime of repercussions after childhood trauma; allowing those in a child's primary care setting too early detect signs of childhood trauma and implement interventions before the onset of psychological and behavioral issues (Curran et al., 2021).

Due to the increased repercussions that have been previously discussed, it is evident that dedicated research, effective interventions, and proper implementation are a needed priority. Unfortunately, in our society, many individuals do not look at the "why" for the lasting repercussions; they just see the lifelong adverse behavior or mental disorders that develop from untreated childhood trauma. Over the last decades, it has been common to criminalize drug users, look down on those who don't succeed, and outcast those with mental disabilities, furthering the stereotypes and discouraging proper intervention (Cabanis et al., 2021). By examining the "why" with this current study, knowledge will be spread on the importance of early intervention and continued support after childhood trauma exposure and give those individuals more of an opportunity to succeed throughout life.

Despite the urgent need and abundance of evidence that treatment for childhood trauma is needed, most healthcare options are lacking early trauma intervention (Cabanis et al., 2021). The information gained through this study will help support the need for all colleges and universities to have proper interventions in place to continue the support that is still needed even many years after exposure to childhood trauma. In addition, these interventions will help those succeed to their best ability during undergraduate studies, where they would continue to face injustices hindering their college success without these interventions.

Biblical Foundations of the Study

Throughout the Bible, the topic of children and their upbringing is brought up in many different ways. It is explained that children should be raised by parents who follow God's

guidance allowing those children also to grow up to follow and love God (Deuteronomy 6:2). Unfortunately, when childhood trauma is experienced through parental neglect or abuse, they are not following God's guidance and the lasting repercussions lead to the child participating in lifelong behaviors that are outside of God's plan. The ongoing repercussions that occur after childhood trauma exposure also prevent children from meeting their full potential, and this goes against God's guidance on how children should be raised (Proverbs 22:6). God wants each of his children to grow into the best versions of themselves and the experience of childhood trauma does an injustice to this development.

Childhood trauma in the form of abuse and neglect often leads to anger and resentment. When a child is betrayed by those who are expected to care for them, it goes against God's wish for parents not to provoke or bring anger upon their children leading the child away from growing closer to their parents and ultimately God (Colossians 3:21; Ephesians 6:4). The emotional frustration after childhood trauma exposure creates a wall between the child and others that hinders communication and relationships with others, ultimately disobeying God's wants for how one should experience their life (Romans 12:10). Those who exposure children to trauma intentionally or become aware of childhood trauma without helping the child is participating in a terrible sin; They are going against God's wish to protect children, and ultimately pushing the child into a life of lasting repercussions that may hinder the child's relationship with God (Matthew 18:1-6). Ultimately, God has placed each of us here to protect children and help them to grow closer to God throughout their lives, which means that it is pivotal to prevent and find interventions for childhood trauma and give children the best chance to spend their lives following God (Mark 10:13-16).

In addition, the importance of learning and school is a constant topic throughout the Bible. God expects those who have gained knowledge throughout their lifetime to spread that knowledge to others, hence the importance of schools (Proverbs 1:5). It is through the knowledge that is accumulated in school settings that we learn more about the world that God has created since all things, including knowledge, are made through Him; ultimately helping to understand His love for us and bring us closer to Him (Colossians 1:16). Thus, College success helps to bring individuals closer to God through their increase in knowledge (Proverbs 2:6). The opportunity to be able to succeed in the college setting also allows individuals to live a life like Jesus, who also was eager to learn and spread knowledge (Matthew 28:19-20). Those who experience childhood trauma are already at a disadvantage, so we must understand the mediating factors contributing to decreased college success rates so they can continue to gain knowledge and become closer to God.

Anxiety is one of the mediating factors that will be examined in this study and an aspect that has been acknowledged throughout the Bible. God does not want us to experience high rates of anxiety; instead, he wants us to put our trust in Him, reducing rates of fear, paranoia, and uneasiness (Philippians 4:6). Individuals with increased anxiety are not relying on God to fulfill their needs and worrying about aspects that are only in His hands (Matthew 6:25-34). It is essential to deeper understand anxiety after trauma; knowledge of repercussions and the support of proper interventions may allow individuals more success throughout their lives while also following God's word and gaining strength through Him (Philippians 4:13).

The next mediating factor is substance use, which throughout the Bible, is warned against due to altering your mind and decreasing your ability to be alert to the world around you (1 Peter 5:8). When you dull your mind with substances it is much easier to slip away from God's plan

and fall into negative behaviors (Ephesians 5:18). The increase in substance use is a dishonor to the body that God gave (1 Corinthians 6:19-20). Gaining knowledge on the prevalence and prevention of substance use after childhood trauma and how it affects factors in our lives can help individuals continue to follow God's path (1 Corinthians 10:13).

The final mediating factor that will be examined is self-esteem. God made each individual unique, and each person's differences are beautiful in God's perspective (Psalm 139:13-14). God does not want any person to feel that they are not enough, He created each person to have love and self-acceptance (2 Timothy 1:7). Change in self-esteem after childhood trauma draws the individual away from God's creation and how to feel about oneself (Song of Solomon 4:7). God views ones spirit and thoughts as the ultimate determinant of their essence (1 Peter 3:3-4), thus we must continue to gain information to help build individuals self-esteem after childhood trauma to follow in God's word.

Summary

As demonstrated throughout this literature review, the impact of childhood trauma exposure can alter the rest of an individual's life. There has been considerable research surrounding childhood trauma and its lasting repercussions, however, there is limited research surrounding the components of anxiety, substance use, and self-esteem mediating the relationship between childhood trauma and college success rates. Therefore, more research is needed to explore what aspects contribute to this relationship and build a better understanding of what interventions may help individuals succeed in school settings after childhood trauma exposure.

Thus, this quantitative correlational research study sets out to examine the relationship between the frequency of complex childhood trauma experienced, anxiety, substance use, self-

esteem, and undergraduate college success rates in early adulthood. The next chapter explains this study's methods that are used to examine the relationship between these variables. Finally, the design of the study, participation criteria, instrument and measure details, limitations, and assumptions will all be discussed.

CHAPTER 3: RESEARCH METHOD

Overview

The purpose of this study was to examine the relationship between complex childhood trauma and undergraduate success rates through the mediating factors of anxiety, substance use, and self-esteem. This quantitative correlational research study set out to bring forth new knowledge surrounding the mediating factors that contribute to the relationship that has previously been found surrounding an individual's academic success being negatively impacted after experiencing childhood trauma (Beattie et al., 2018; Blodgett & Lanigan, 2018). The mediating factors were independently examined to bring forth knowledge about how each contributes to the primary relationship examined.

This chapter outlines the research methodology design, including the research questions, participants, study procedures, instruments and measures, the operationalization of variables, data analysis, and the assumptions and limitations of this study.

Research Questions and Hypotheses

Research Questions

RQ 1: What is the relationship between the frequency of complex childhood trauma and college success rate, as measured by the relationship between scores on the Childhood Trauma Questionnaire and the Academic Success Inventory for College Students?

RQ 2: How does anxiety, as measured by the Generalized Anxiety Disorder 7-item, mediate the relationship between the frequency of complex trauma and college success rate?

RQ 3: How does the rate of substance use, as measured by the Alcohol, Smoking, and Substance Involvement Screening Test, mediate the relationship between frequency of complex trauma and college success rate?

RQ 4: How does the rate of self-esteem, as measured by the Rosenberg Self-Esteem Scale, mediate the relationship between the frequency of complex trauma and college success rate?

Hypotheses

H_a1: There will be a negative correlational relationship between the frequency of complex childhood trauma and college success rate. As the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease.

H_a2: After childhood trauma exposure, individuals will have a higher rate of anxiety which will contribute to lower college success rates.

H_a3: After childhood trauma exposure, individuals will have a higher rate of substance use which will contribute to lower college success rates.

H_a4: After childhood trauma exposure, individuals will have a lower rate of self-esteem which will contribute to lower college success rates.

Research Design

This non-experimental correlational quantitative research study's primary purpose is to empirically evaluate if the frequency of complex childhood trauma exposure predicts college success rates for early adults during undergraduate studies. More specifically, this study was designed to examine how the mediating factors of anxiety, substance use, and self-esteem are altered after childhood trauma exposure, ultimately influencing an individual's ability to succeed

in an undergraduate college setting. A non-experimental design was utilized because none of the variables were manipulated, and all variables were examined as they naturally occur (Creswell & Creswell, 2018).

This study utilized a cross-sectional survey design to gain information regarding the different variables via SurveyMonkey. Using this survey design allowed for this quantitative study to test the relationships between the variables while also examining a sample of the population to discover any particular trends (Creswell & Creswell, 2018). The advantages of a survey design study are the ability to reach students through an online platform during their busy schedules and the rapid turnaround in data collection (Creswell & Creswell, 2018).

Participants

This quantitative research study recruited undergraduate students from Liberty University, a private Evangelical university based in Lynchburg, Virginia. Participants were excluded from the study if they were not between the ages of 18 and 24 in order to examine the unique period of early adulthood. Participants also were excluded from the study if they do not complete all sections of the online questionnaires. The participants were recruited through private Liberty University student Facebook groups with a post that included a link to access the questionnaires. Participants were able to complete the questionnaires on their own time when it was convenient for them to complete all questions within 2 weeks of the recruitment post being made. A Gpower analysis for a Pearson correlation with a large effect size ($\rho = 0.5$), using a minimum power of 0.80 and an alpha of 0.05, determined that a minimum of 29 participants will be recruited for this study.

Study Procedures

First, IRB approval from Liberty University's Research department was gained in order to ensure that the research is ethically acceptable and complies with protecting human rights. Next, the participant recruitment and data collection process began. Participants were recruited via private Facebook Liberty University student group pages with information about the study and a link that brought them to the SurveyMonkey questionnaire (Appendix A). The first aspect of the questionnaire that was completed by all participants in order to proceed forward with the study was the informed consent. The informed consent (Appendix B) included information that participation in the study was completely voluntary, the ability to withdraw from the study at any time, and that all information and answers would remain private and anonymous. This also contained information that participants should not expect to receive a direct benefit from taking part in this study. Informed consent also discussed that the expected risks from participating in this study were minimal, which means they are equal to the risks you would encounter in everyday life. The risks involved in this study included the possibility of psychological stress from being asked to recall and discuss prior trauma. To reduce risk, the researcher provided referral information for counseling services, if needed, to Liberty University's Student Counseling Services at 434-582-2651 and studentcounselingservices@liberty.edu. The informed consent also discussed that the records of this study would be kept private. Research records are be stored securely, and only the researcher has access to the records. Participant responses will be anonymous. Data is stored on a password-locked computer. After five years, all electronic records will be deleted. The next section of the questionnaire completed by participants was their demographic information, including gender, age, and race (Appendix C). The final part of the questionnaire completed was the instruments used to measure childhood trauma exposure,

undergraduate student success, anxiety rates, substance use rates, and self-esteem rates. The responses from participants were then downloaded and entered into IBM SPSS Statistics.

Instrumentation and Measurement

Childhood Trauma Measure

Childhood Trauma Questionnaire – Short Form (Appendix D)

This 28- item self-report inventory was used to understand the amount of childhood trauma exposure each participant has experienced in the form of abuse (emotional, physical, and sexual) and neglect (emotional and physical) (Bernstein et al., 2003; Furlong, 2001). The short form of the Childhood Trauma Questionnaire is based off the original Childhood Trauma Questionnaire which had 70 questions (Bernstein et al., 2003). The 5 subscales within the short form questionnaire contain five items with scores ranging from 5, indicating no history of abuse or neglect, to 25, indicating an extreme history of abuse and neglect (Bernstein et al., 2003; Furlong, 2001). This questionnaire utilizes a 5-point Likert scale, with 1 being never true and 5 being very often true, adding up the scores in each subscale to determine exposure to each of the forms of abuse and neglect (Bernstein et al., 2003; Furlong, 2001). This questionnaire has been found to have high reliability and internal consistency with sexual abuse, emotional neglect, emotional abuse, and physical abuse having coefficients of .93-.95, .88-92, .84-.89, and .81-.86 (Bernstein et al., 2003). Validity was found through an analysis that tested different populations

with this questionnaire which discovered that the different subscales measured the same constructs across all groups (Bernstein et al., 2003; Furlong, 2001).

Academic Success Measure

Academic Success Inventory for College Students (Appendix E)

This 50-item self-report measures general academic skills (12 items), internal motivation (8 items), perceived efficacy of instructors (5 items), concentration (4 items), external motivation - future (4 items), socializing (4 items), career decidedness (4 items), anxiety (3 items), personal adjustment (3 items) and external motivation – current (3 items) (Prevatt et al., 2011). A likert scale from 1 to 7 is used throughout this measure with 1 being strongly disagree and 7 being strongly agree (Prevatt et al., 2011). The 10 subscales are converted into one scale score ranging from 1-100 (Prevatt et al., 2011). Internal reliability was found to be good throughout each subscale with coefficients of: general academic skills - 0.93, internal motivation/confidence - 0.86, perception of instructor efficacy - 0.92, concentration - 0.87, external motivation/future - 0.88, socializing - 0.84, career decidedness - 0.87, lack of anxiety - 0.77, personal adjustment - 0.86, and external motivation/current - 0.62 (Prevatt et al., 2011). The validity of this questionnaire measure was found through an analysis that tested different populations, which concluded that variations in academic success were successfully tested using this measure (Prevatt et al., 2011).

Anxiety Measure

Generalized Anxiety Disorder 7-item (Appendix F)

This 7-item brief self-report measure was used to determine the rate of anxiety an individual experienced throughout the previous 2 weeks (Spitzer et al., 2006). Responses to the 7 items are gained using a Likert scale with response options being “not at all,” “several days,”

"more than half the days," and "nearly every day," scored as 0, 1, 2, and 3 (Spitzer et al., 2006). The total scores from this measure range from 0 to 21, with higher scores meaning higher rates of generalized anxiety disorder symptoms (Spitzer et al., 2006). The internal consistency and reliability of this measure has been found to be very good, with a coefficient of 0.92 and a test-retest reliability coefficient of 0.83 (Spitzer et al., 2006). Good procedural validity was found through the comparison of scores, resulted in a correlation of 0.83 (Spitzer et al., 2006).

Substance Use Measure

Alcohol, Smoking, and Substance Involvement Screening Test (Appendix G)

This measure was created for the World Health Organization (WHO) to determine all levels of problem or risky substance use in adults (Group & WHO ASSIST Working Group, 2002). Questions cover tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants (including ecstasy) inhalants, sedatives, hallucinogens, opioids, and 'other drugs' (Group & WHO ASSIST Working Group, 2002). After answering all questions participants' score will be ranked into one of three categories, 'low risk', 'moderate risk' or 'high risk' (Group & WHO ASSIST Working Group, 2002). The reliability of this measure has been found to be good to excellent across all measures, with a high coefficient of 0.90 (Group & WHO ASSIST Working Group, 2002).

Self-Esteem Measure

Rosenberg Self-Esteem Scale (Appendix H)

This 10-item self-report was used to measure individual rates of self-esteem using 5 positively worded items and 5 negatively worded items (Rosenberg, 1965). A Likert scale is utilized throughout this measure, with responses to each item being: strongly agree, agree, disagree, or strongly disagree (Rosenberg, 1965). Scores range from 0-3 for each question

resulting in a final score range between 0 and 30, with higher scores on the measure indicating higher rates of self-esteem (Rosenberg, 1965). The internal reliability of this measure has been found to be good, with a coefficient of 0.86 (Rosenberg, 1965). This measure has also been found to have high procedural validity was found through the comparison of scores of different populations (Rosenberg, 1965).

Operationalization of Variables

Childhood Trauma Exposure – this independent variable was measured by the total score on the Childhood Trauma Questionnaire – Short Form (CTQ-SF) (Bernstein et al., 2003).

Undergraduate Academic Success – this dependent variable was measured by the total score on the Academic Success Inventory for College Students (ASICS) (Prevatt et al., 2011).

Anxiety – this mediating variable was measured by the total score on the Generalized Anxiety Disorder 7-item (GAD-7) (Spitzer et al., 2006).

Substance Use – this mediating variable was measured by the total score on the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) (Group & WHO ASSIST Working Group, 2002).

Self-Esteem - this mediating variable was measured by the total score on the Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965).

Data Analysis

Once data was collected it was transferred to SPSS software from SurveyMonkey. Once the data was in SPSS, it was organized and coded. Next, data analysis began on the different sections of the online survey. First, the demographic was examined using descriptive analysis to

understand the population of those who completed the survey. Non-numerical demographic data was assigned numerical values prior to analysis.

Next, since each of the 5 variable measures are Likert scales, answers were examined and given points based on selection. Those points were then added together to get each participant's score for each individual questionnaire. Then, an analysis of each hypothesis was conducted.

The hypothesis regarding the relationship between the frequency of complex childhood trauma and college success rates was examined using a bivariate Pearson's correlation analysis. A bivariate correlation analysis was utilized in order to examine the relationship between the two variables, frequency of complex childhood trauma and college success rate (Bridgmon & Martin, 2012). The correlation research method of linear regression analysis was utilized to provide information that shows the predictive relationship between the amount of childhood trauma experienced and college success rates (Bridgmon & Martin, 2012). Linear regressions analysis is a form of bivariate correlation analysis that ultimately predicts the dependent variable (undergraduate success rates) from the independent variable (childhood trauma exposure) (Bridgmon & Martin, 2012).

Finally, for the three remaining hypotheses regarding the mediating factors of anxiety, substance use, and self-esteem and their influence on the relationship between childhood trauma and undergraduate success a multiple regression analysis and factorial ANOVA was conducted. The multiple regression analysis and factorial ANOVA was independently run for each of the 3 hypotheses in order to analyze the effects of childhood trauma and each mediating variable, (anxiety, substance use, and self-esteem) on undergraduate success rates (Bridgmon & Martin, 2012). The purpose of the multiple regression analysis was to analyze the extent that the independent variable and mediating variable related to the dependent variable (Bridgmon &

Martin, 2012). The purpose of a factorial ANOVA was to assess main effects and interaction effects among the variables (Bridgmon & Martin, 2012).

Delimitations, Assumptions, and Limitations

Delimitations

The first delimitation is that during this study, success rates during undergraduate studies were only examined, not other levels of schooling beforehand, which can contribute to college success rates. The level of education and success experienced in high school and previous grades can contribute to how prepared an individual is to complete undergraduate studies. Also, the success rates in college can be influenced by many outside factors, which were not all considered throughout this study. Some external factors that may contribute to academic success rates are an individual's IQ score, stress management, social skills, and family/peer support. In addition, rates of anxiety, substance use, and self-esteem can be influenced by other life factors, not just childhood trauma, which were not examined throughout this study. The other delimitation of this study is that all participants are from one particular college and only ages between 18 and 24. The participants only being from a single Christian-based college does not allow the results of this study to fully be generalized to the entire population.

Assumptions

An assumption of this study is that all participants answered the questionnaire honestly and were willing to share personal information. Another assumption is that the participant may believe the researcher wanted a particular answer and give that rather than answer honestly. A way to help support the idea that participants were completely honest is by reassuring the participants that their identity remained anonymous throughout the entire study, especially when collecting demographic information. The act of ensuring the protection of the participant's

identity was completed by not asking any identifying questions that allowed answers to be connected to a particular person. The participant's identity was also protected since the researcher never came into direct contact with any of the participants. All these different factors came together to support the assumption of the participants truthfulness.

Another assumption of this study is that the experience of childhood trauma will alter the behavior that is seen throughout the lifetime, ultimately influencing other aspects of the individual's life. After exposure to childhood trauma, it is assumed that the individual will have more difficulties resulting in a difference between them and their peers.

Limitations

A limitation that from this study was the dependence on self-report questionnaires to gain all of the data from participants. Therefore, it is possible that because it was self-disclosed that the information gathered will not be entirely accurate and that participants leaned towards the more socially acceptable answer rather than being entirely truthful. Another limitation with this research design was that individuals had a lot to manage being undergraduate students adapting to the demands of college life and would have not wanted to participate since it would add to their responsibilities.

Summary

This research aimed to examine childhood trauma exposure and undergraduate success rates and to show how essential it is to see that these two variables are interconnected. Children exposed to trauma early in their childhood are often affected tremendously. By understanding the

data collected from this research, we can further improve interventions after childhood trauma to support and promote positive growth throughout life.

This chapter presented the methods by which this study was conducted. A quantitative research study was used to gather information on the relationship between childhood trauma and undergraduate college success rates. The methods used in this study were an online survey containing 7 different sections, 1 informed consent section, 1 demographic section, and 5 questionnaires pertaining to each variable. The next chapter will discuss the results that were found through this study.

CHAPTER 4: RESULTS

Overview

The purpose of this non-experimental quantitative correlational research study was to examine the relationship between complex childhood trauma and undergraduate success rates through the mediating factors of anxiety, substance use, and self-esteem. Interest in this topic began with a review of literature that described the impact of childhood trauma exposure can alter the rest of an individual's life. There has been considerable research surrounding childhood trauma and its lasting repercussions; however, the literature presented a gap in research surrounding the components of anxiety, substance use, and self-esteem mediating the relationship between childhood trauma and college success rates. For these reasons, the researcher chose to recruit undergraduate college students to examine the five variables.

This chapter restates the research components from earlier chapters relating to the research questions and hypotheses. Next, a description of the study's measures and the demographics of the sample will be discussed. Then, the data analysis and findings will detail which findings are significant and which are not. Finally, this chapter concludes with a summary of the results and an evaluation of the research design.

Research Questions

RQ 1: What is the relationship between the frequency of complex childhood trauma and college success rate, as measured by the relationship between scores on the Childhood Trauma Questionnaire and the Academic Success Inventory for College Students?

RQ 2: How does anxiety, as measured by the Generalized Anxiety Disorder 7-item, mediate the relationship between the frequency of complex trauma and college success rate?

RQ 3: How does the rate of substance use, as measured by the Alcohol, Smoking, and Substance Involvement Screening Test, mediate the relationship between the frequency of complex trauma and college success rate?

RQ 4: How does the rate of self-esteem, as measured by the Rosenberg Self-Esteem Scale, mediate the relationship between the frequency of complex trauma and college success rate?

Hypotheses

H_a1: There will be a negative correlational relationship between the frequency of complex childhood trauma and college success rate. As the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease.

H_a2: After childhood trauma exposure, individuals will have a higher rate of anxiety which will contribute to lower college success rates.

H_a3: After childhood trauma exposure, individuals will have a higher rate of substance use which will contribute to lower college success rates.

H_a4: After childhood trauma exposure, individuals will have a lower rate of self-esteem which will contribute to lower college success rates.

Descriptive Results

The survey was electronically collected via SurveyMonkey. The survey included an informed consent section, a demographic section, the RSE, the GAD-7, the ASICS, the CTQ-SF,

and the ASSIST. Questions 1-4 were demographic questions; questions 5-14 were the RSE; questions 15-21 were the GAD-7; questions 22-71 were the ASICS; questions 72-99 were the CTQ-SF; and questions 100-107 were the ASSIST. There was a total of 85 responses, of these responses, 31 were excluded for incomplete answers or not meeting criteria, resulting in a total of 54 complete responses.

The 54 participants of the study were all current undergraduate college students between the ages of 18-24. Of the 54 participants, 43 of them were female (79.6%), and 11 of them were male (20.4%) (Table 1). Next, examining the participant's race, 41 participants were White or Caucasian (75.9%), 9 participants were Hispanic or Latino (16.7%), 3 participants were Black or African American (5.6%), and 1 participant was Asian (1.9%) (Table 2).

Table 1

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	43	79.6	79.6	79.6
	Male	11	20.4	20.4	100.0
	Total	54	100.0	100.0	

Table 2

What is your race?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Asian	1	1.9	1.9	1.9
	Black or African American	3	5.6	5.6	7.4
	Hispanic or Latino	9	16.7	16.7	24.1
	White	41	75.9	75.9	100.0
	Total	54	100.0	100.0	

Study Findings

Individual Measurement Results

Childhood Trauma Questionnaire – Short Form

First, the researcher examined the results of each measurement. Results of the Childhood Trauma Questionnaire – Short Form were examined. It was found that 26 participants (48.1%) had none to minimal exposure to emotional abuse, 9 participants (16.7%) had low exposure, 8 participants (14.8%) had moderate exposure, and 11 participants (20.4%) had severe exposure (Table 3; Figure 1).

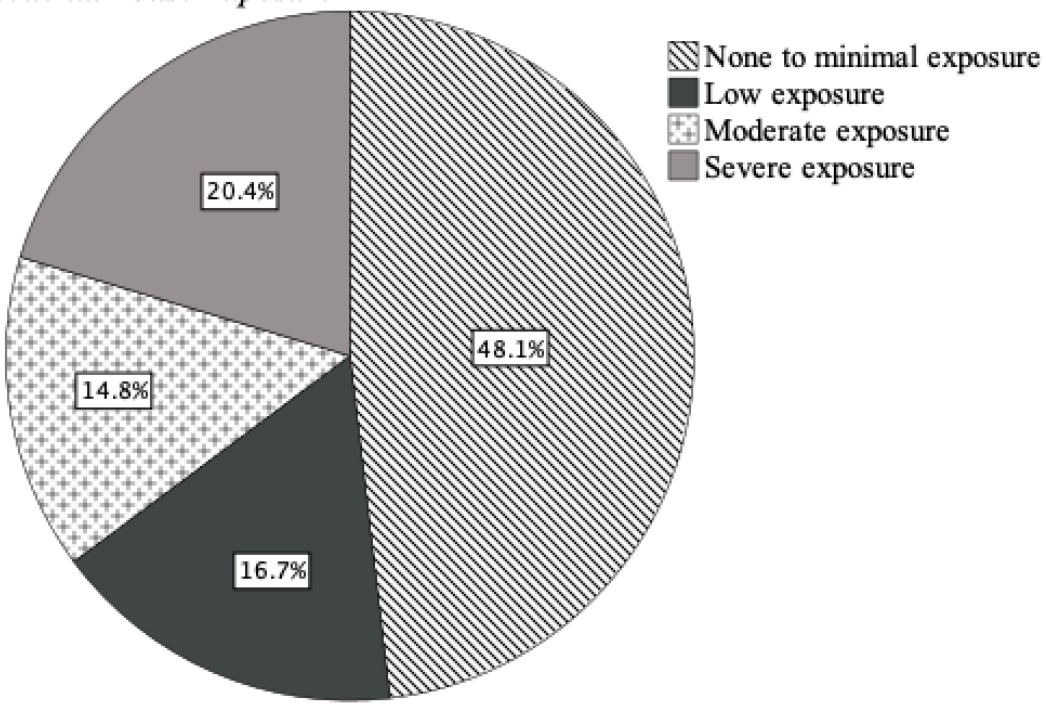
Table 3

Emotional Abuse Exposure

		Frequency	Percent
Valid	None to minimal exposure	26	48.1
	Low exposure	9	16.7
	Moderate exposure	8	14.8
	Severe exposure	11	20.4
	Total	54	100.0

Figure 1

Emotional Abuse Exposure



Next, it was found that 42 participants (77.8%) had none to minimal exposure to emotional abuse, 1 participant (1.9%) had low exposure, 4 participants (7.4%) had moderate exposure, and 7 participants (13.0%) had severe exposure (Table 4; Figure 2).

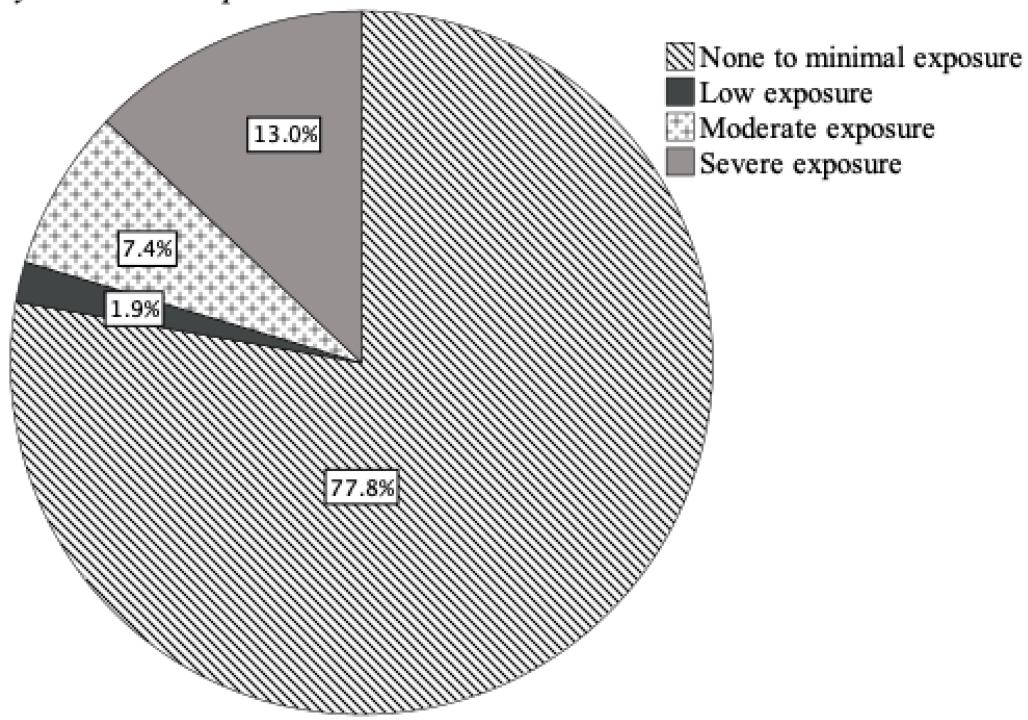
Table 4

Physical Abuse Exposure

		Frequency	Percent
Valid	None to minimal exposure	42	77.8
	Low exposure	1	1.9
	Moderate exposure	4	7.4
	Severe exposure	7	13.0
	Total	54	100.0

Figure 2

Physical Abuse Exposure



Examining the sexual abuse subscale, it was found that 47 participants (87.0%) had none to minimal exposure to emotional abuse, 0 participants (0.0%) had low exposure, 6 participants (11.1%) had moderate exposure, and 1 participant (1.9%) had severe exposure (Table 5; Figure 3).

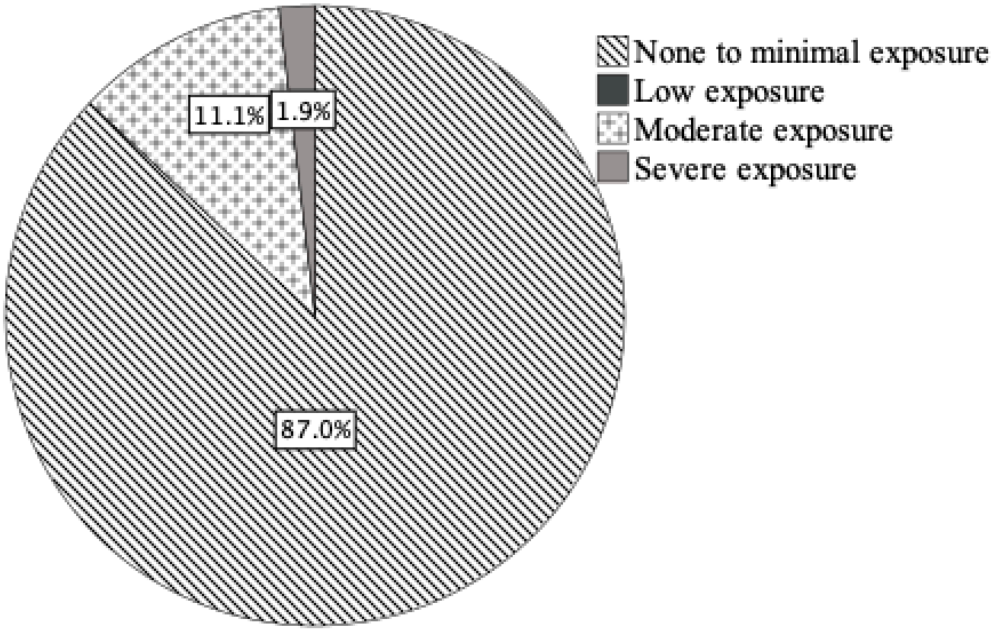
Table 5

Sexual Abuse Exposure

		Frequency	Percent
Valid	None to minimal exposure	47	87.0
	Moderate exposure	6	11.1
	Severe exposure	1	1.9
	Total	54	100.0

Figure 3

Sexual Abuse Exposure



Next, it was found that 23 participants (42.6%) had none to minimal exposure to emotional abuse, 12 participants (22.2%) had low exposure, 14 participants (25.9%) had moderate exposure, and 5 participants (9.3%) had severe exposure (Table 6; Figure 4).

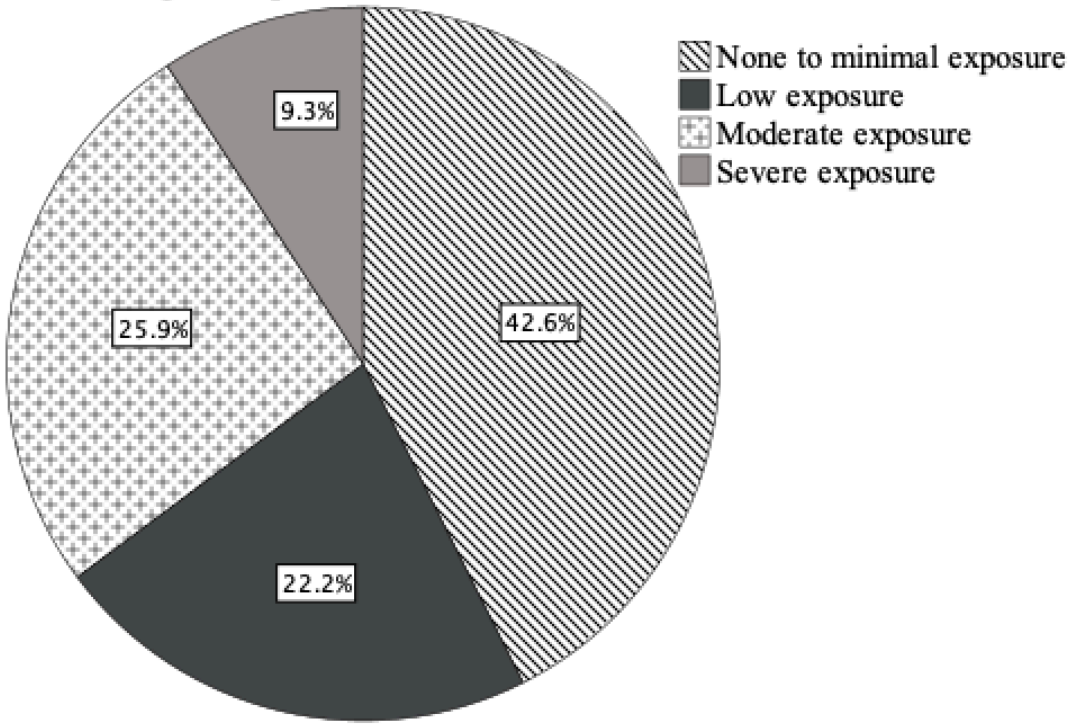
Table 6

Emotional Neglect Exposure

		Frequency	Percent
Valid	None to minimal exposure	23	42.6
	Low exposure	12	22.2
	Moderate exposure	14	25.9
	Severe exposure	5	9.3
	Total	54	100.0

Figure 4

Emotional Neglect Exposure



The final subscale of the Childhood Trauma Questionnaire – Short Form measures physical neglect exposure. It was found that 28 participants (51.9%) had none to minimal exposure to emotional abuse, 6 participants (11.1%) had low exposure, 8 participants (14.8%) had moderate exposure, and 12 participants (22.2%) had severe exposure (Table 7; Figure 5).

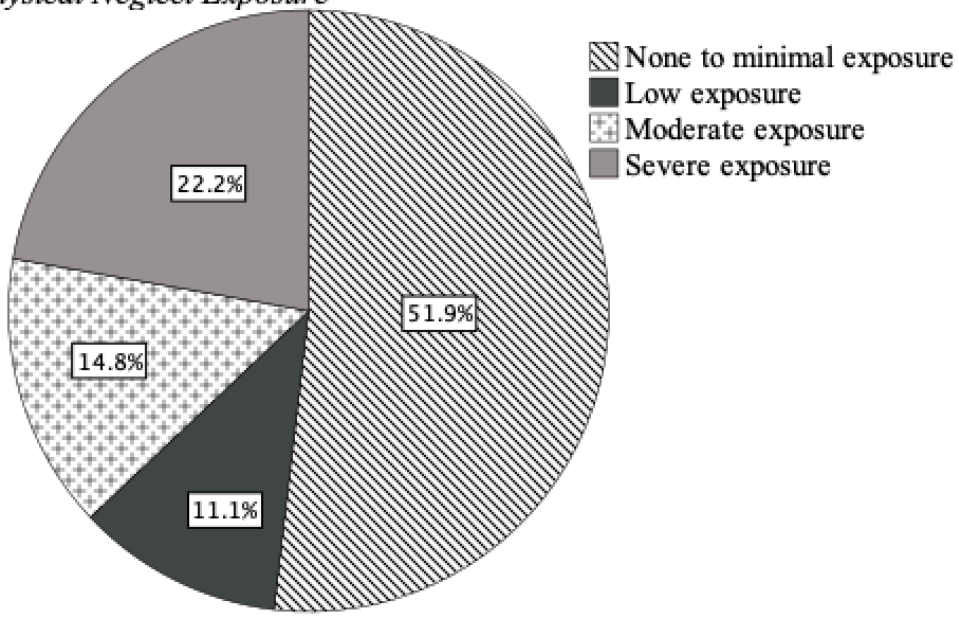
Table 7

Physical Neglect Exposure

		Frequency	Percent
Valid	None to minimal exposure	28	51.9
	Low exposure	6	11.1
	Moderate exposure	8	14.8
	Severe exposure	12	22.2
	Total	54	100.0

Figure 5

Physical Neglect Exposure



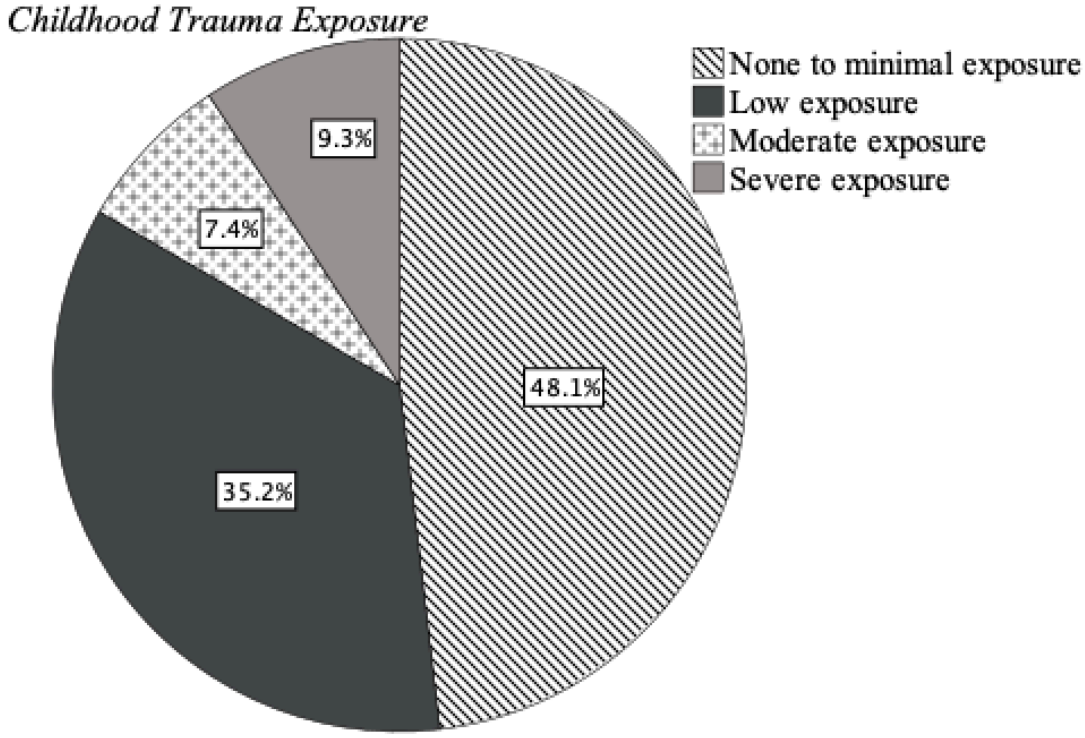
Overall, participants experienced emotional neglect (57.4%), emotional abuse (51.9%), and physical neglect (48.1%) the most, while physical abuse (22.2%) and sexual abuse (13%) were the least experienced. After averaging the participant's overall childhood trauma scores, it was found that 26 participants (48.1%) had none to minimal exposure to childhood trauma, 19 participants (35.2%) had low exposure, 4 participants (7.4%) had moderate exposure, and 5 participants (9.3%) had severe exposure (Table 8; Figure 6).

Table 8

Childhood Trauma Exposure

		Frequency	Percent
Valid	None to minimal exposure	26	48.1
	Low exposure	19	35.2
	Moderate exposure	4	7.4
	Severe exposure	5	9.3
	Total	54	100.0

Figure 6



Academic Success Inventory for College Students

The Academic Success Inventory for College Students was examined, and it was found that the mean for all the participants on a scale from 0-100 was 58.7 for their overall scores, which is the average of the 10 subscales (Table 9). The results of their overall academic success rate scores ranged from 33 to 92 among the 54 participants.

Table 9

Overall Academic Success Total

N	Valid	54
	Missing	0
Mean		58.7
Median		59.4
Std. Deviation		15.7
Range		58
Minimum		33
Maximum		92

The first subscale of the Academic Success Inventory for College Students examined the participant's career decidedness. The mean score was calculated to be 71.1, with scores ranging from 14 to 86 for the participants (Table 10).

Table 10

Career Decidedness Total

N	Valid	54
	Missing	0
Mean		71.1
Median		82.1
Std. Deviation		27.7
Range		86
Minimum		14
Maximum		100

The next subscale looked at the participant's internal motivation to succeed in an academic setting. It was found that the average participant score was 61.3, with total scores ranging from 20 to 100 (Table 11).

Table 11

Internal Motivation Total

N	Valid	54
	Missing	0
Mean		61.3
Median		66.9
Std. Deviation		24.2
Range		80
Minimum		20
Maximum		100

The participant's future external motivation was examined next. It was found that the mean score for all participants was 61.7, with scores ranging from 14 to 86 (Table 12).

Table 12

Future External Motivation Total

N	Valid	54
	Missing	0
Mean		61.7
Median		64.3
Std. Deviation		26.4
Range		86
Minimum		14
Maximum		100

Next, the Academic Success Inventory for College Students examined the participant's general academic skills. The mean score of all the participants was 71.0, which included scores ranging from 32 to 100 (Table 13).

Table 13

General Academic Skill Total

N	Valid	54
	Missing	0
Mean		71.0
Median		76.8
Std. Deviation		19.8
Range		68
Minimum		32
Maximum		100

Lack of anxiety was examined next. The participant's scores ranged from 14 to 90, with the average of the participant's scores being 28.9 (Table 14).

Table 14

Lack of Anxiety Total

N	Valid	54
	Missing	0
Mean		28.9
Median		19.0
Std. Deviation		19.9
Range		76
Minimum		14
Maximum		90

The next subscale looked at the participant's concentration ability in an academic setting. It was found that the average participant score was 43.0, with total scores ranging from 14 to 96 (Table 15).

Table 15

Concentration Total

N	Valid	54
	Missing	0
Mean		43.0
Median		39.3
Std. Deviation		23.2
Range		82
Minimum		14
Maximum		96

The participant's current external motivation was examined next. It was found that the mean score for all participants was 74.1, with scores ranging from 19 to 100 (Table 16).

Table 16

Current External Motivation Total

N	Valid	54
	Missing	0
Mean		74.1
Median		80.9
Std. Deviation		19.6
Range		81
Minimum		19
Maximum		100

Next, the Academic Success Inventory for College Students examined the participant's personal adjustment to an undergraduate college setting. The mean score of all the participants was 54.8, which included scores ranging from 14 to 100 (Table 17).

Table 17

Personal Adjustment Total

N	Valid	54
	Missing	0
Mean		54.8
Median		52.4
Std. Deviation		28.5
Range		86
Minimum		14
Maximum		100

The participant's perceived instructor efficacy was examined next. The participant's scores ranged from 14 to 100, with the average of the participant's scores being 42.8 (Table 18).

Table 18

Perceived Instructor Efficacy Total

N	Valid	54
	Missing	0
Mean		49.9
Median		42.8
Std. Deviation		25.5
Range		86
Minimum		14
Maximum		100

The final subscale of the Academic Success Inventory for College Students examined the participant's socializing impact. The mean score was calculated to be 71.3, with scores ranging from 14 to 100 for the participants (Table 19).

Table 19

Socializing Total

N	Valid	54
	Missing	0
Mean		71.3
Median		75.0
Std. Deviation		26.3
Range		86
Minimum		14
Maximum		100

Overall, the highest mean subscale score was 74.1, which regarded the participant's current external motivation to succeed in an undergraduate college program. Closely followed by the participant's socializing impact, 71.3, the participant's career decidedness, 71.1, and the participant's general academic skills, 71.0. The lowest subscale mean scores were the participant's lack of anxiety, 28.9, the participant's perceived instructor efficacy, 42.8, and the participant's concentration ability, 43.0.

Generalized Anxiety Disorder 7-Item

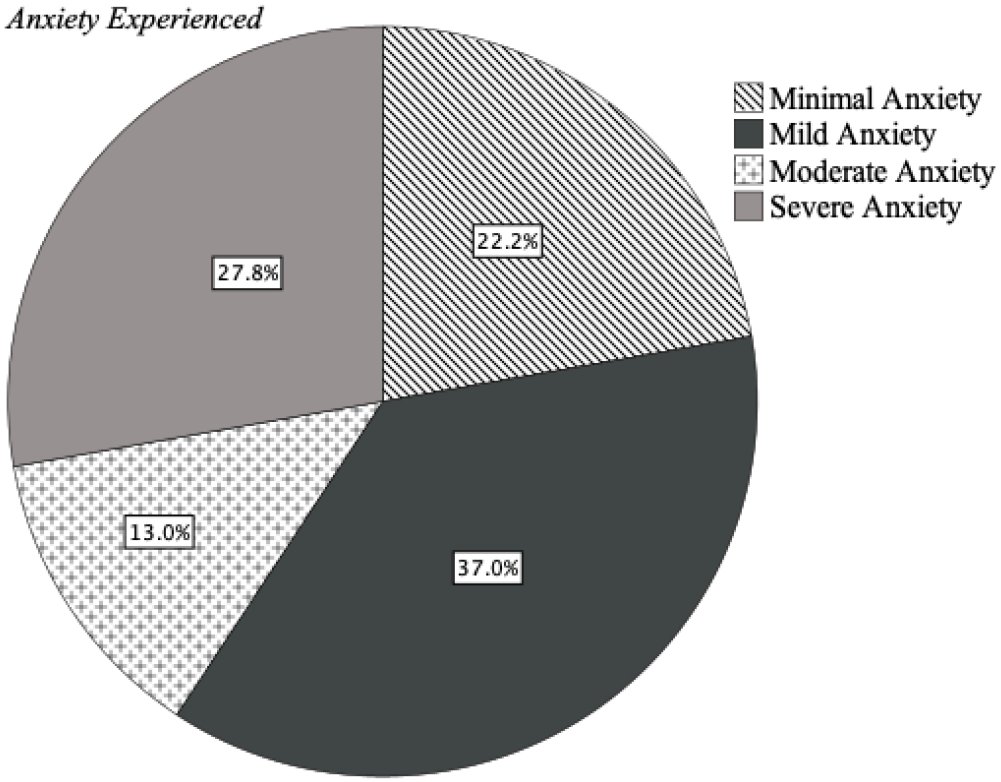
Results of the Generalized Anxiety Disorder 7-Item were examined. It was found that 12 participants (22.2%) experienced minimal anxiety, 20 participants (37.0%) experienced mild anxiety, 7 participants (13.9%) experienced moderate anxiety, and 15 participants (27.8%) experienced severe anxiety (Table 20; Figure 7).

Table 20

Anxiety Experienced

	Frequency	Percent
Minimal Anxiety	12	22.2
Mild Anxiety	20	37.0
Moderate Anxiety	7	13.0
Severe Anxiety	15	27.8
Total	54	100.0

Figure 7



Alcohol, Smoking, And Substance Involvement Screening Test

The Alcohol, Smoking, And Substance Involvement Screening Test was examined, it was found that the mean of the participant's overall score on a scale from 0 to 414 was 30.8, which is the sum of the 10 subscales examining each type of substance (Table 21). The results of their overall academic success rate scores ranged from 0 to 98 among the 54 participants.

Table 21

Overall ASSIST Score

N	Valid	54
	Missing	0
Mean		30.8
Median		23.0
Std. Deviation		27.6
Range		98
Minimum		0
Maximum		98

The first subscale examining the participant's risk level of health and other problems due to their use of tobacco found that 30 participants (55.6%) have never used tobacco, 13 participants (24.1%) are at a low risk, 11 participants (20.4%) are at moderate risk, and 0 participants (0.0%) are at a high risk (Table 22; Figure 8).

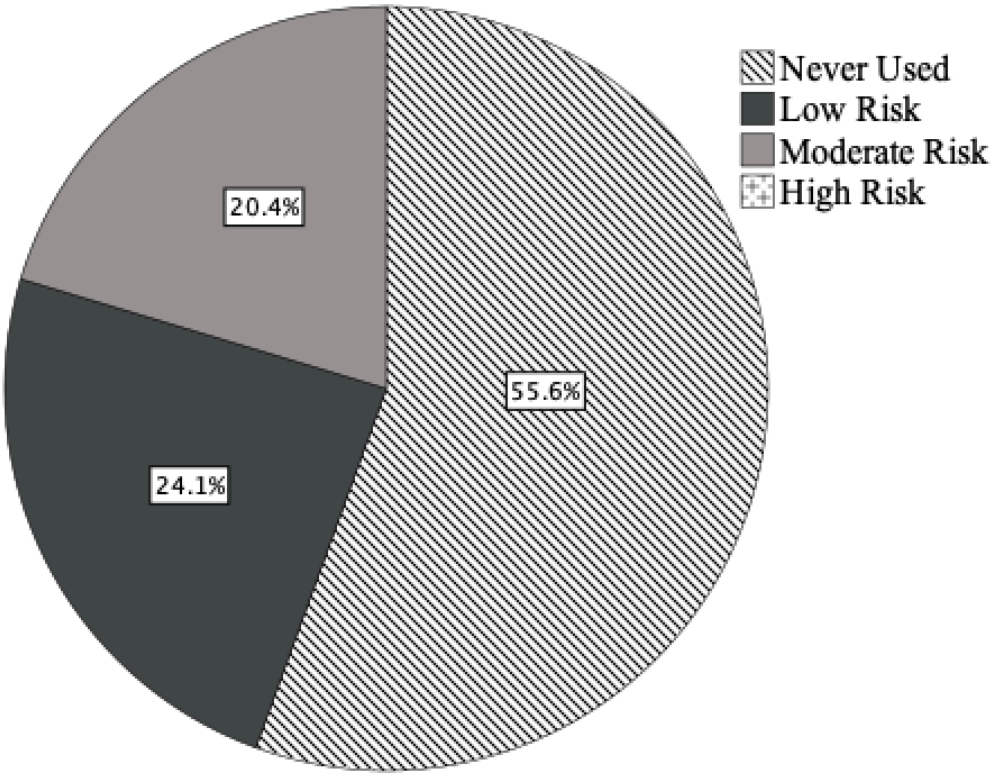
Table 22

Tobacco Risk Level

	Frequency	Percent
Never Used	30	55.6
Low Risk	13	24.1
Moderate Risk	11	20.4
Total	54	100.0

Figure 8

Tobacco Risk Level



The next subscale examined the participant's risk level of health and other problems due to their alcohol use. It was found that 3 participants (5.6%) have never used alcohol, 33 participants (61.1%) are at a low risk, 17 participants (31.5%) are at moderate risk, and 1 participant (1.9%) is at a high risk (Table 23; Figure 9).

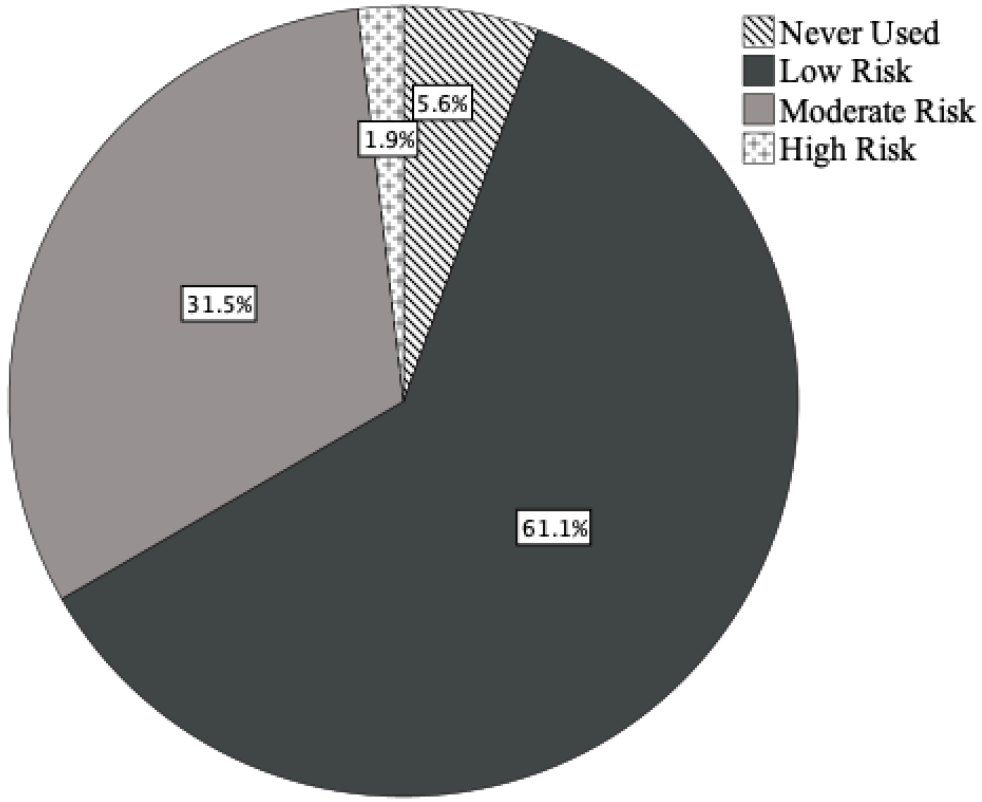
Table 23

Alcohol Risk Level

	Frequency	Percent
Never Used	3	5.6
Low Risk	33	61.1
Moderate Risk	17	31.5
High Risk	1	1.9
Total	54	100.0

Figure 9

Alcohol Risk Level



The participant's risk level of health and other problems due to their cannabis use was examined next. It was found that 15 participants (27.8%) have never used cannabis, 18 participants (33.3%) are at a low risk, 14 participants (25.9%) are at moderate risk, and 7 participants (13.0%) are at a high risk (Table 24; Figure 10).

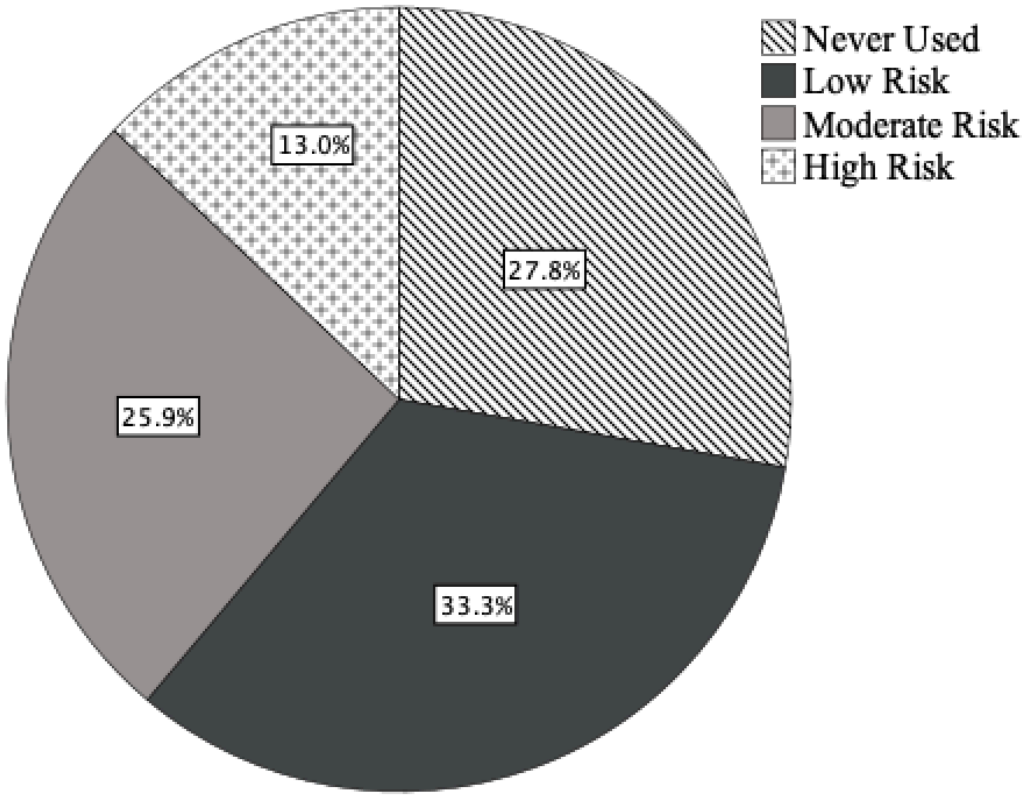
Table 24

Cannabis Risk Level

	Frequency	Percent
Never Used	15	27.8
Low Risk	18	33.3
Moderate Risk	14	25.9
High Risk	7	13.0
Total	54	100.0

Figure 10

Cannabis Risk Level



The next subscale examined the participant's risk level of health and other problems due to their cocaine use. It was found that 48 participants (88.9%) have never used cocaine, 4 participants (7.4%) are at a low risk, 2 participants (3.7%) are at moderate risk, and 0 participants (0.0%) are at a high risk (Table 25; Figure 11).

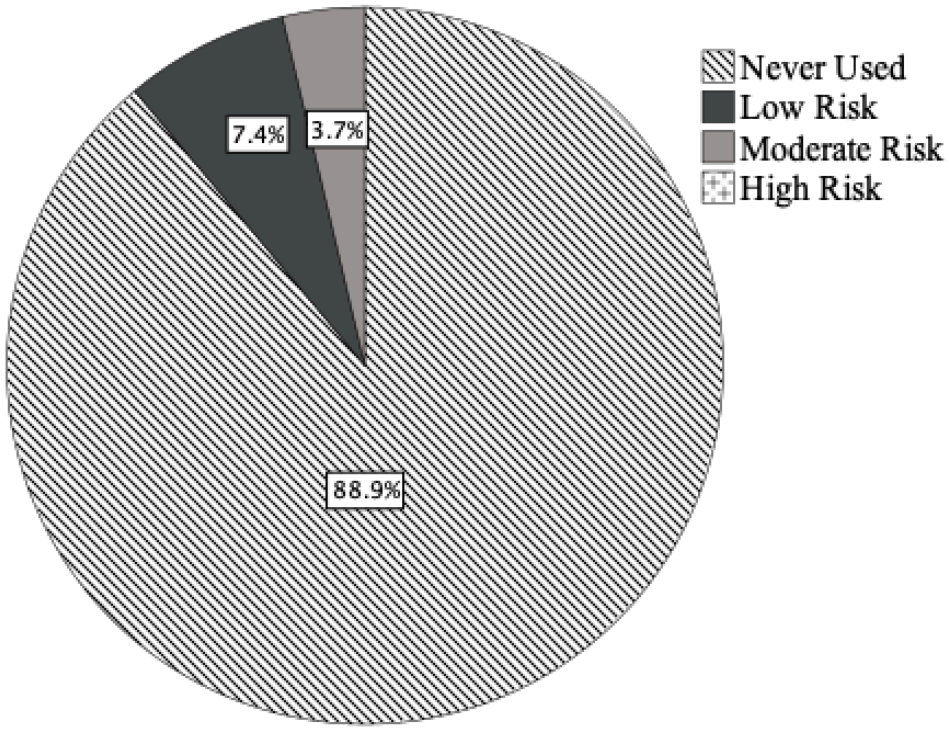
Table 25

Cocaine Risk Level

	Frequency	Percent
Never Used	48	88.9
Low Risk	4	7.4
Moderate Risk	2	3.7
Total	54	100.0

Figure 11

Cocaine Risk Level



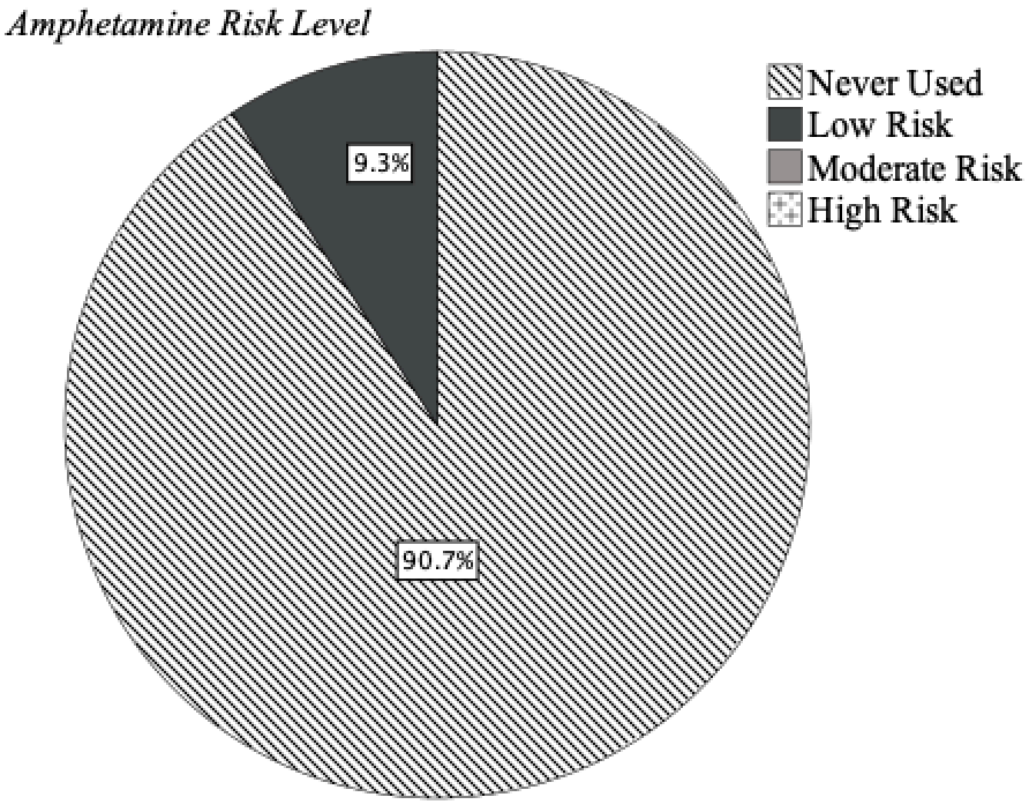
The participant's risk level of health and other problems due to their amphetamine use was examined next. It was found that 49 participants (90.7%) have never used amphetamines, 5 participants (9.3%) are at a low risk, 0 participants (0.0%) are at moderate risk, and 0 participants (0.0%) are at a high risk (Table 26; Figure 12).

Table 26

Amphetamine Risk Level

	Frequency	Percent
Never Used	49	90.7
Low Risk	5	9.3
Total	54	100.0

Figure 12



The next subscale examined the participant's risk level of health and other problems due to their inhalant use. It was found that 51 participants (94.4%) have never used inhalants, 2 participants (3.7%) are at a low risk, 1 participant (1.9%) is at moderate risk, and 0 participants (0.0%) are at a high risk (Table 27; Figure 13).

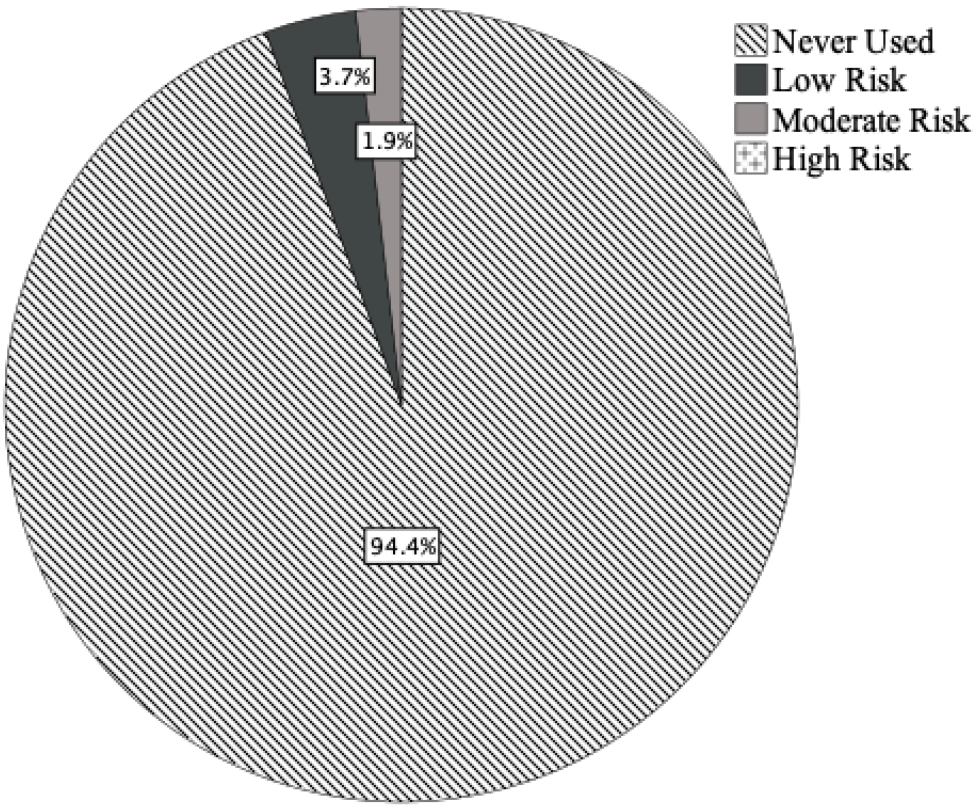
Table 27

Inhalant Risk Level

	Frequency	Percent
Never Used	51	94.4
Low Risk	2	3.7
Moderate Risk	1	1.9
Total	54	100.0

Figure 13

Inhalant Risk Level



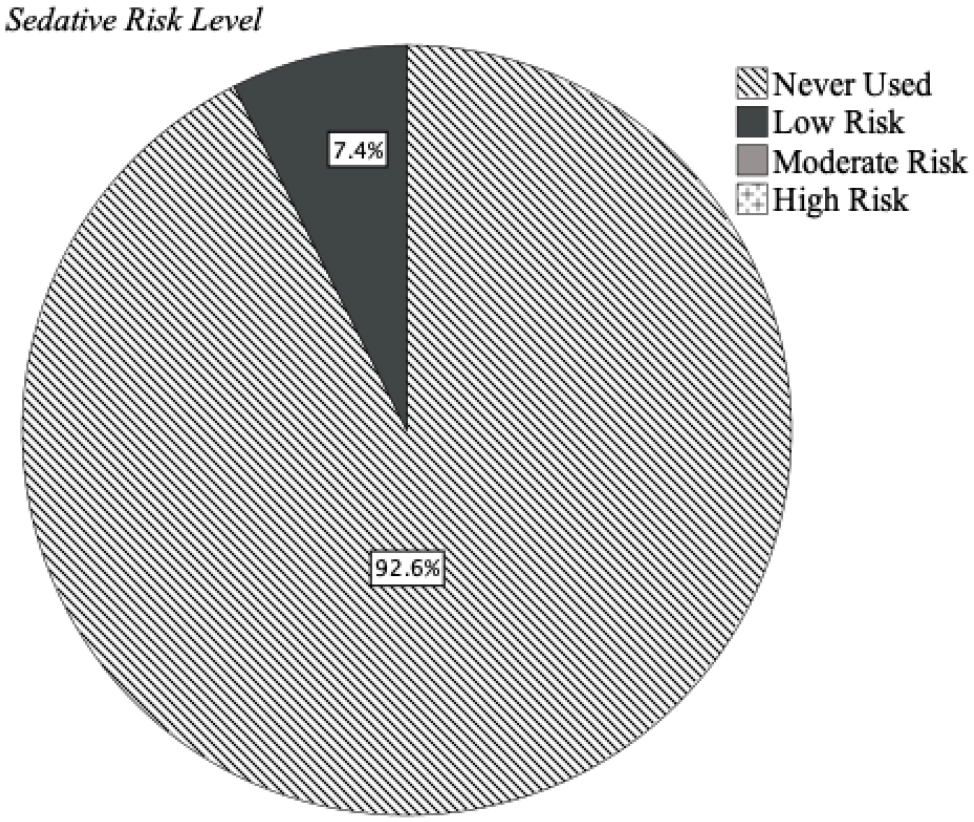
The participant's risk level of health and other problems due to their sedative use was examined next. It was found that 50 participants (92.6%) have never used sedatives, 4 participants (7.4%) are at a low risk, 0 participants (0.0%) are at moderate risk, and 0 participants (0.0%) are at a high risk (Table 28; Figure 14).

Table 28

Sedative Risk Level

	Frequency	Percent
Never Used	50	92.6
Low Risk	4	7.4
Total	54	100.0

Figure 14



The next subscale examined the participant's risk level of health and other problems due to their hallucinogen use. It was found that 50 participants (98.1%) have never used hallucinogens, 2 participants (3.7%) are at a low risk, 2 participants (3.7%) are at moderate risk, and 0 participants (0.0%) are at a high risk (Table 29; Figure 15).

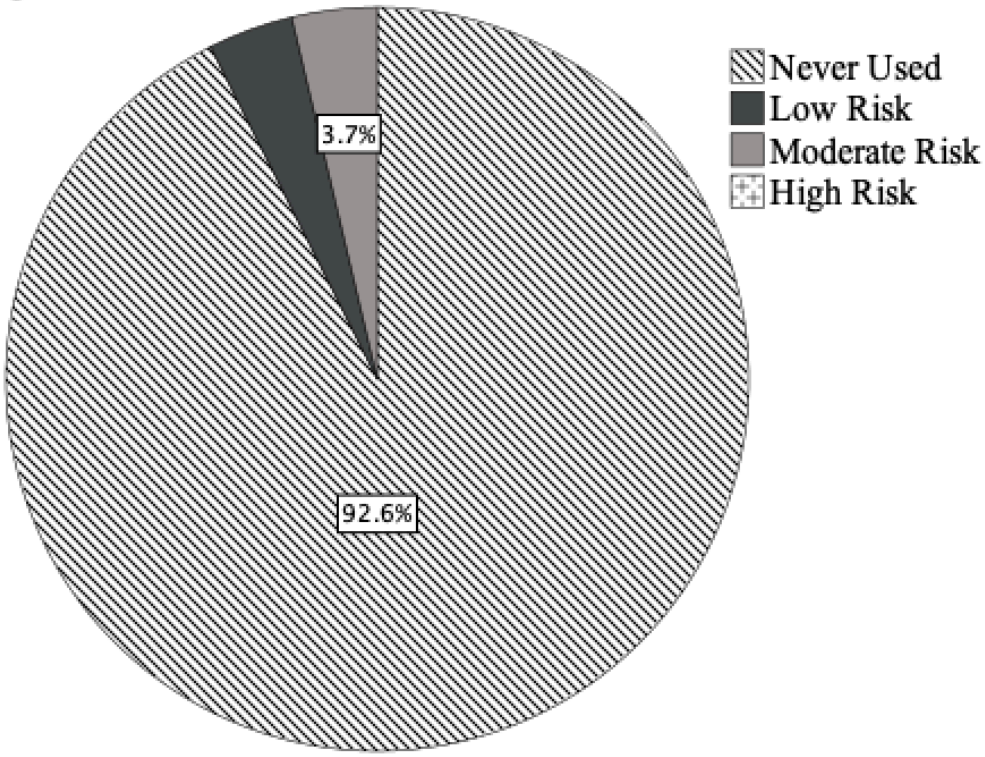
Table 29

Hallucinogen Risk Level

	Frequency	Percent
Never Used	50	92.6
Low Risk	2	3.7
Moderate Risk	2	3.7
Total	54	100.0

Table 15

Hallucinogen Risk Level



The participant's risk level of health and other problems due to their opioid use were examined next. It was found that 49 participants (90.7%) have never used sedatives, 3 participants (5.6%) are at a low risk, 2 participants (3.7%) are at moderate risk, and 0 participants (0.0%) are at a high risk (Table 30; Figure 16).

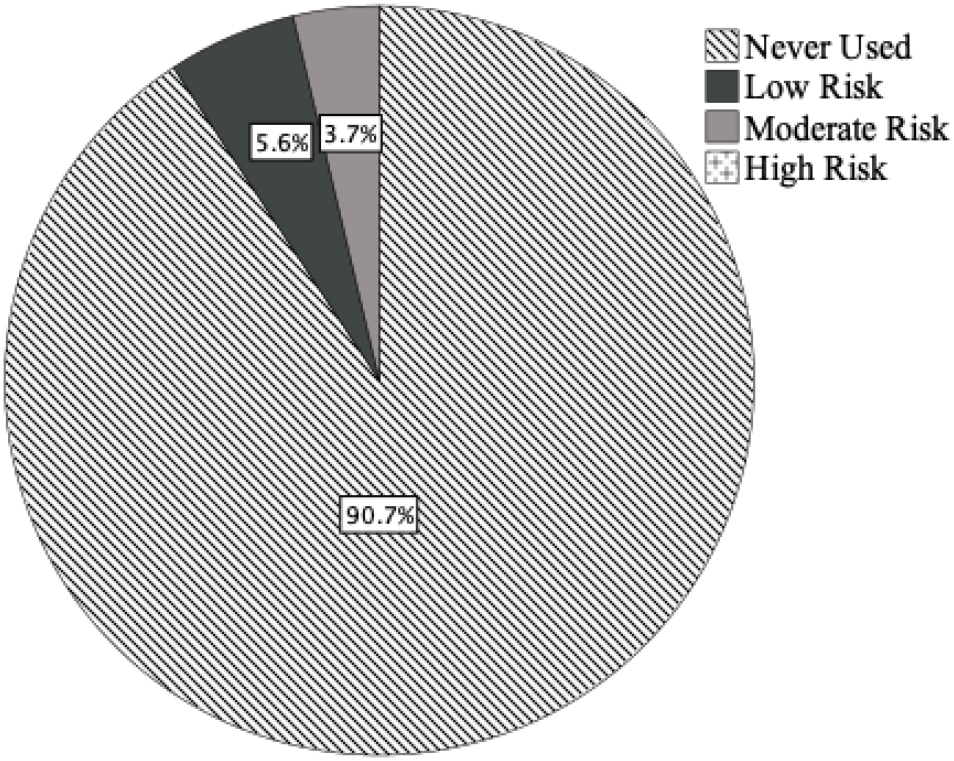
Table 30

Opioid Risk Level

	Frequency	Percent
Never Used	49	90.7
Low Risk	3	5.6
Moderate Risk	2	3.7
Total	54	100.0

Figure 16

Opioid Risk Level



The final subscale examined the participant's risk level of health and other problems due to their use of any other drug. It was found that 54 participants (100.0%) have never used any other drug than the ones already examined (Table 31).

Table 31

Other Drug Risk Level

	Frequency	Percent
Never Used	54	100.0

Overall, 3 out of the 54 participants were found to have never used any substances. The most used substance was alcohol with 51 participants using alcohol within their lifetime, followed by cannabis with 39 participants using it within their lifetime. Alcohol and cannabis were the two subscales that resulted in participants being at high risk of experiencing severe

problems (health, social, financial, and legal) as a result of their current use and are likely for those participants to be dependent. 7 participants are at high risk due to their cannabis use and 1 participant is at high risk due to their alcohol use.

Rosenberg Self-Esteem Scale

Results of the Rosenberg Self-Esteem Scale were examined. It was found that the mean score among participants was 27.2, with scores ranging from 16 to 39 (Table 32). Possible scores range from 10 to 40, with scores under 15 showing low self-esteem and scores over 25 showing high self-esteem. It was found that 26 participants (48.1%) scores fell within the normal self-esteem range, and 28 participants (51.9%) scores fell within the high self-esteem range, while 0 participants had scores under 15 in the low self-esteem range (Table 33; Figure 17).

Table 32

RSE Results

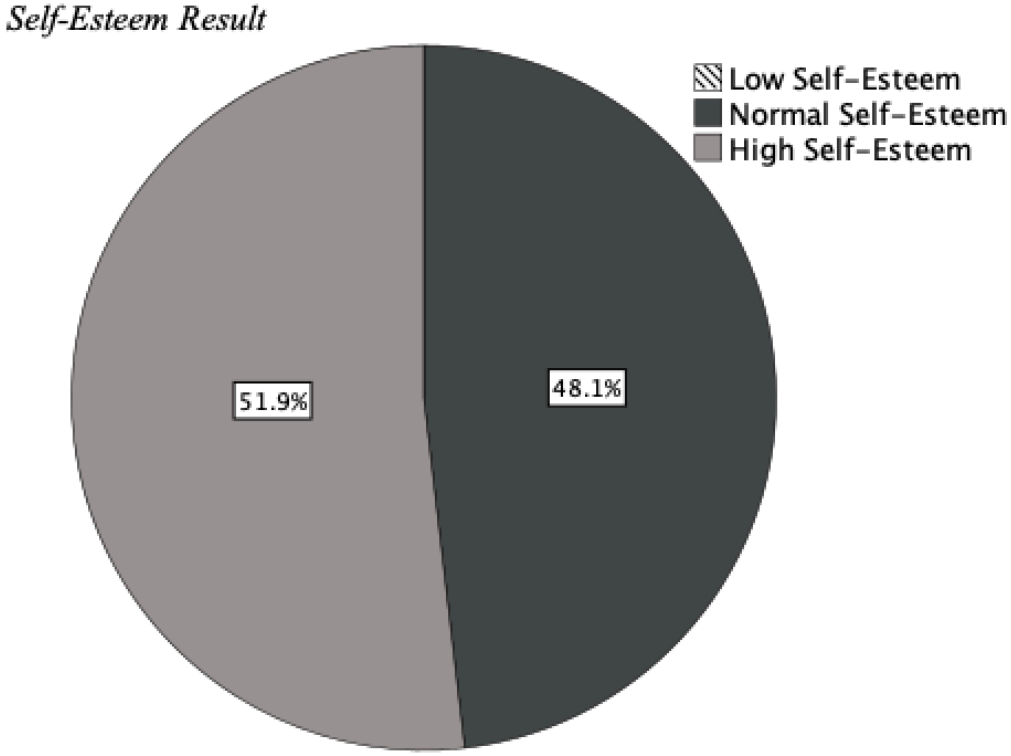
N	Valid	54
	Missing	0
Mean		27.2
Median		27.5
Std. Deviation		6.5
Range		23
Minimum		16
Maximum		39

Table 33

Self-Esteem Results

		Frequency	Percent
	Normal Self-Esteem	26	48.1
	High Self-Esteem	28	51.9
	Total	54	100.0

Figure 17



Comparative Results

Hypothesis 1

First, to determine the relationship, if any, between the frequency of complex childhood trauma and college success rates, the researcher first used a bivariate Pearson's correlation analysis. The bivariate Pearson's correlation revealed a significant relationship between the frequency of complex childhood trauma and college success rates, $r(52)=-.510$, $p<.001$ (Table 34). This finding supports the hypothesis that there will be a negative correlational relationship between the frequency of complex childhood trauma and college success rate. As the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease.

Table 34

Bivariate Pearson's Correlation

		Child Abuse Total	Academic Success Total
Child Abuse Total	Pearson Correlation	1	-.510**
	Sig. (1-tailed)		<.001
	N	54	54
Academic Success Total	Pearson Correlation	-.510**	1
	Sig. (1-tailed)	<.001	
	N	54	54

**. Correlation is significant at the 0.01 level (1-tailed).

Next, the correlation research method of linear regression analysis was utilized to provide information that shows the predictive relationship between the amount of childhood trauma experienced and college success rates. The linear regression analysis evaluated the prediction of college success rates based on the amount of childhood trauma experienced and was found to be significant $F(1.52) = 18.264$, $p<.001$ (Table 35). The regression equation for predicting college success rates is $Y' = -.524X + 81.060$. The correlation between the amount of childhood trauma experienced and college success rates is -.510 (Table 36; Figure 18). Approximately 26.01% of the variance in college success rates was accounted for by its linear relationship with the amount of childhood trauma experienced (Table 37).

Table 35

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3380.663	1	3380.663	18.264	<.001[b]
	Residual	9625.174	52	185.100		
	Total	13005.837	53			

a. Dependent Variable: Academic Success Total

b. Predictors: (Constant), Child Abuse Total

Table 36

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	81.060	5.547		14.614	<.001
	Child_Abuse_Total	-.524	.123	-.510	-4.274	<.001

a. Dependent Variable: Academic Success Total

Table 37

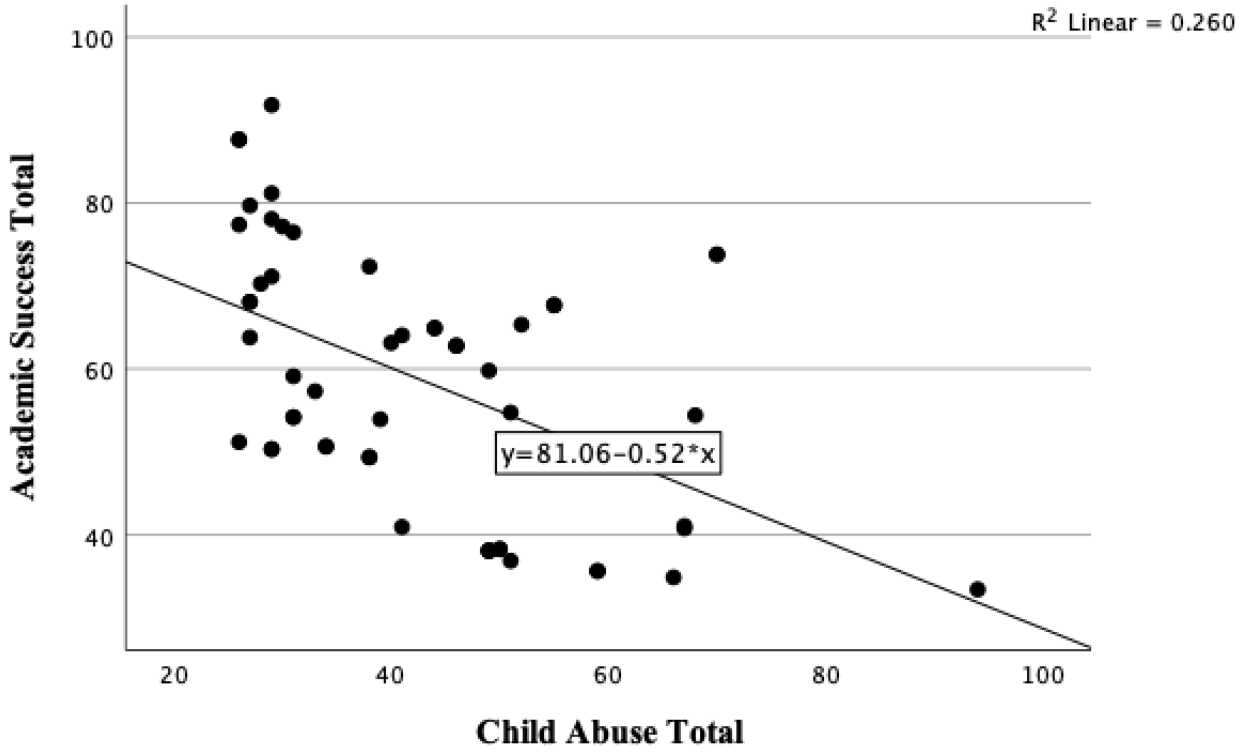
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.510[a]	.260	.246	13.605

a. Predictors: (Constant), Child Abuse Total

Figure 18

Scatterplot of the predictive relationship between the amount of childhood trauma experienced and academic success rates.



Hypothesis 2

Next, the researcher examined the hypothesis that after childhood trauma exposure, individuals will have a higher rate of anxiety which will contribute to lower college success rates. A multiple regression analysis was us to analyze the extent that childhood trauma exposure and anxiety related to college success rates. The overall model explains a 27.20% variation in college success rates, and it is significantly useful in explaining college success rates, F (2, 51) = 9.551, p < .001 (Table 38; Table 39). With a one-unit increase in child abuse total, the academic success total decreases by -.461, which was found to be a significant change t (52) = -3.293, p

=.002 (Table 40). With a one-unit increase in anxiety total, the academic success total decreases by -.318, which was not found to be a significant change t (52) = -.938, p = .353 (Table 39).

Table 38

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.522[a]	.272	.244	13.621	1.761

a. Predictors: (Constant), Anxiety Total, Child Abuse Total

b. Dependent Variable: Academic Success Total

Table 39

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3543.862	2	1771.931	9.551	<.001[b]
	Residual	9461.975	51	185.529		
	Total	13005.837	53			

a. Dependent Variable: Academic Success Total

b. Predictors: (Constant), Anxiety Total, Child Abuse Total

Table 40

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	81.431	5.567		14.627	<.001		
	Child Abuse Total	-.461	.140	-.448	-3.293	.002	.769	1.300
	Anxiety Total	-.318	.339	-.128	-.938	.353	.769	1.300

a. Dependent Variable: Academic Success Total

A factorial ANOVA was used to assess the main effects and interaction effects among rates of anxiety, childhood trauma exposure, and college success rates. The main effect of anxiety experienced on academic success was found not to be significant, F(3,42) = 1.898, p=.145, $\eta_P{}^2 = .119$ (Table 41). It was also found that there was a main effect on the amount of childhood trauma exposure, F(3,42) = 3.254, p = .031, $\eta_P{}^2 = .189$ (Table 41). The interaction of anxiety experienced and childhood trauma exposure on academic success was found not to be significant. F(5,42) = 1.839, p = .126, $\eta_P{}^2 = .180$ (Table 41). Therefore, childhood trauma experienced contributes to overall academic success, but the amount of anxiety experienced does not contribute to this relationship.

Table 41

Tests of Between-Subjects Effects

Academic Success: Overall_Academic_Success_Total

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6328.514[a]	11	575.319	3.619	.001	.487
Intercept	81014.855	1	81014.855	509.579	<.001	.924
Anxiety Experienced	905.141	3	301.714	1.898	.145	.119
Childhood Trauma Exposure	1551.864	3	517.288	3.254	.031	.189
Anxiety Experienced * Childhood Trauma Exposure	1461.806	5	292.361	1.839	.126	.180
Error	6677.323	42	158.984			
Total	199167.064	54				
Corrected Total	13005.837	53				

[a] R Squared = .487 (Adjusted R Squared = .352)

Hypothesis 3

Next, the researcher examined the hypothesis that after childhood trauma exposure, individuals will have a higher rate of substance use which will contribute to lower college success rates. A multiple regression analysis was us to analyze the extent that childhood trauma

exposure and substance use related to college success rates. The overall model explains a 31.40% variation in college success rates, and it is significantly useful in explaining college success rates, F (2, 51) = 11.647, p < .001 (Table 42; Table 43). With a one-unit increase in child abuse total, the academic success total decreases by -.357, which was found to be a significant change t (52) = -2.451, p =.018 (Table 44). With a one-unit increase in drug score total, the academic success total decreases by -.160, which was found to be a significant change t (52) = -1.996, p = .051 (Table 42).

Table 42

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.560[a]	.314	.287	13.231	1.714

a. Predictors: (Constant), Total Drug Score, Child Abuse Total

b. Dependent Variable: Academic Success Total

Table 43

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4077.926	2	2038.963	11.647	<.001[b]
	Residual	8927.911	51	175.057		
	Total	13005.837	53			

a. Dependent Variable: Academic Success Total

b. Predictors: (Constant), Total Drug Score, Child Abuse Total

Table 44

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	78.886	5.503		14.335	<.001		
	Child Abuse Total	-.357	.146	-.347	-2.451	.018	.670	1.492
	Total Drug Score	-.160	.080	-.283	-1.996	.051	.670	1.492

[a] Dependent Variable: Academic Success Total

A factorial ANOVA was used to assess the main effects and interaction effects among substance use, childhood trauma exposure, and college success rates. The main effect of substance use on academic success was found not to be significant, F(3,44) = 1.637, p=.195, $\eta_P{}^2 = .100$ (Table 45). It was also found that there was a main effect on the amount of childhood trauma exposure, F(3,44) = 5.002, p = .005, $\eta_P{}^2 = .254$ (Table 45). The interaction of substance use and childhood trauma exposure on academic success was found not to be significant. F(3,44) = .525, p = .667, $\eta_P{}^2 = .035$ (Table 45). Therefore, childhood trauma experienced contributes to overall academic success, but the amount of substance use does not contribute to this relationship.

Table 45

Tests of Between-Subjects Effects

Academic Success: Overall_Academic_Success_Total

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5304.946[a]	9	589.438	3.368	.003	.408
Intercept	71287.065	1	71287.065	407.308	<.001	.903
Childhood Trauma Exposure	2626.170	3	875.390	5.002	.005	.254
Substance Use Risk	859.415	3	286.472	1.637	.195	.100
Childhood Trauma Exposure * Substance Use Risk	275.785	3	91.928	.525	.667	.035
Error	7700.891	44	175.020			
Total	199167.064	54				
Corrected Total	13005.837	53				

[a] R Squared = .408 (Adjusted R Squared = .287)

Hypothesis 4

The final hypothesis examined that after childhood trauma exposure, individuals will have lower rates of self-esteem which will contribute to lower college success rates. A multiple regression analysis was us to analyze the extent that childhood trauma exposure and self-esteem related to college success rates. The overall model explains a 26.60% variation in college success rates, and it is significantly useful in explaining college success rates, F (2, 51) = 9.241, p < .001 (Table 46; Table 47). With a one-unit increase in child abuse total, the academic success total decreases by -.463, which was found to be a significant change t (52) = -2.997, p =.004 (Table 48). With a one-unit increase in self-esteem total, the academic success total increases by .234, which was found not to be a significant change t (52) = .649, p = .519 (Table 48).

Table 46

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.516[a]	.266	.237	13.681	1.717

a. Predictors: (Constant), Self_Esteem_Total, Child_Abuse_Total

b. Dependent Variable: Academic Success Total

Table 47

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3459.619	2	1729.810	9.241	<.001[b]
	Residual	9546.218	51	187.181		
	Total	13005.837	53			

a. Dependent Variable: Academic Success Total

b. Predictors: (Constant), Self Esteem Total, Child Abuse Total

Table 48

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	72.110	14.866		4.851	<.001		
	Child Abuse Total	-.463	.155	-.451	-2.997	.004	.636	1.573
	Self Esteem Total	.234	.360	.098	.649	.519	.636	1.573

a. Dependent Variable: Academic Success Total

Finally, A factorial ANOVA was used to assess the main effects and interaction effects among self-esteem, childhood trauma exposure, and college success rates. The main effect of

self-esteem on academic success was found not to be significant, F(1,47) =.211, p=.648, $\eta_P^2 = .004$ (Table 49). It was also found that there was a main effect on the amount of childhood trauma exposure, F(3,47) = 3.590, p = .020, $\eta_P^2 = .186$ (Table 49). The interaction of substance use and childhood trauma exposure on academic success was to be significant. F(2,47) = 5.987, p = .005, $\eta_P^2 = .203$ (Table 49). Therefore, childhood trauma experienced contributes to overall academic success and the amount of self-esteem does contribute to this relationship.

Table 49

Tests of Between-Subjects Effects

Academic Success: Overall_Academic_Success_Total

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5776.948[a]	6	962.825	6.260	<.001	.444
Intercept	56615.665	1	56615.665	368.098	<.001	.887
Childhood Trauma Exposure	1656.409	3	552.136	3.590	.020	.186
Self Esteem	32.426	1	32.426	.211	.648	.004
Childhood Trauma Exposure * Self Esteem	1841.677	2	920.838	5.987	.005	.203
Error	7228.889	47	153.806			
Total	199167.064	54				
Corrected Total	13005.837	53				

[a] R Squared = .444 (Adjusted R Squared = .373)

Summary

The purpose of this non-experimental quantitative correlational research study was to examine the relationship between complex childhood trauma and undergraduate success rates through the mediating factors of anxiety, substance use, and self-esteem. This study consisted of 54 current undergraduate college students between the ages of 18-24. Of the 54 participants, 43 of them were female, and 11 of them were male. When examining forms of childhood trauma, it was found that participants experienced emotional neglect, emotional abuse, and physical neglect

the most. The findings surrounding aspects that support college success suggested that participants' highest scores related to their current external motivation to succeed, socialization, career decidedness, and general academic skills. Anxiety rate results found that 12 participants experienced minimal anxiety, 20 participants experienced mild anxiety, 7 participants experienced moderate anxiety, and 15 participants experienced severe anxiety. Examining substance use found that alcohol and cannabis were the two subscales, resulting in participants at high risk of experiencing severe problems (health, social, financial, and legal) as a result of their current use and likely for those participants to be dependent. Self-esteem results found that 26 participants had normal self-esteem, and 28 participants had high self-esteem.

While examining the relationship between the frequency of complex childhood trauma and college success rates, it was found that there is a negative correlational relationship, as the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease. Research then examined anxiety's mediating effect on the relationship between childhood trauma and college success rates; it was found that anxiety does not contribute to that relationship. Findings surrounding substance use's mediating effect on the relationship between childhood trauma and college success rates concluded with mixed results. It was found that as drug use increased, college success decreased, but that substance use did not contribute to the relationship between childhood trauma and college success rates. Research then examined self-esteem's mediating effect on the relationship between childhood trauma and college success rates; it was found that self-esteem does contribute to that relationship. Next, in Chapter 5, further exploration of the results and what they mean, how they compare, and their implications will be discussed.

CHAPTER 5: DISCUSSION

Overview

The purpose of this study was to examine the relationship between complex childhood trauma and undergraduate success rates through the mediating factors of anxiety, substance use, and self-esteem. This quantitative correlational research study set out to bring forth new knowledge surrounding the mediating factors that contribute to the relationship that has previously been found surrounding an individual's academic success being negatively impacted after experiencing childhood trauma (Beattie et al., 2018; Blodgett & Lanigan, 2018). The mediating factors were independently examined to bring forth knowledge about how each contributes to the primary relationship examined.

This chapter summarizes the findings of the study to begin. Next, a discussion will emphasize the significant results of the study. Then, the study's contribution to theory, practice, and biblical foundations based on the findings will be discussed. This chapter will conclude with an examination of the study's limitations and recommendations for future research.

Summary of Findings

This research study set out to examine four different hypotheses. The first hypothesis looked at the relationship between the frequency of complex childhood trauma and college success rates. It was hypothesized that there would be a negative correlational relationship between the frequency of complex childhood trauma and college success rates; thus, as the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease. This hypothesis was confirmed, as the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students decreases.

The second hypothesis examined how anxiety mediates the relationship between the frequency of complex trauma and college success rates. It was hypothesized that after childhood trauma exposure, individuals will have a higher rate of anxiety, which will contribute to lower college success rates. This hypothesis was rejected, and there were no significant findings supporting anxiety as a mediating factor in the relationship between the frequency of complex trauma and college success rates.

The third hypothesis examined how the rate of substance use mediates the relationship between the frequency of complex trauma and college success rates. It was hypothesized that after childhood trauma exposure, individuals will have a higher rate of substance use, which will contribute to lower college success rates. This hypothesis was rejected. There was a significant negative change in college success rates with increased rates of substance use, but there were no significant findings supporting substance use as a mediating factor in the relationship between the frequency of complex trauma and college success rates.

The fourth hypothesis examined how self-esteem mediates the relationship between the frequency of complex trauma and college success rates. It was hypothesized that after childhood trauma exposure, individuals will have a lower rate of self-esteem, which will contribute to lower college success rates. This hypothesis was confirmed, childhood trauma experienced contributes to overall academic success, and the amount of self-esteem does contribute to this relationship.

Discussion of Findings

With more than two-thirds of children experiencing a traumatic event by age 18 (American Psychological Association, 2008; Greenberg et al., 2018; Soleimanpour et al., 2017), it is important to understand how the repercussions from that exposure influence other areas of their lives. Those who exposure children to trauma intentionally or become aware of childhood

trauma without helping the child are participating in a terrible sin. They are going against God's wish to protect children and ultimately pushing the child into a life of lasting repercussions that may hinder the child's relationship with God (Matthew 18:1-6). Looking into those repercussions, this study found strong, significant evidence that as childhood trauma exposure increases, individuals will have lower rates of undergraduate college success rates. This validates other studies that found exposure to multiple childhood trauma experiences, known as complex trauma, increases the risk of lifelong repercussions (Aas et al., 2016; Curran et al., 2021). The lasting repercussions of childhood trauma exposure can stick with individuals throughout their lifetime, leading to behavioral and psychological changes (Douglas et al., 2019; Görg et al., 2019), which can help to explain the decrease in undergraduate success rates that this study found. It is through the knowledge that is accumulated in school settings that we learn more about the world that God has created since all things, including knowledge, are made through Him, ultimately helping to understand His love for us and bring us closer to Him (Colossians 1:16). Thus, college success helps to bring individuals closer to God through their increase in knowledge (Proverbs 2:6) but this is hindered after childhood trauma showing the need for a deeper understanding of what contributes to this relationship and how to implement interventions that will support college success after childhood trauma.

There are many mediating factors that may contribute to the negative correlational relationship between childhood trauma exposure and undergraduate college success rates, and this study set out to examine three different mediating factors. First, since 18.3% of individuals will suffer from an anxiety disorder in adulthood after childhood trauma exposure (Novais et al., 2021), it was important to examine its influence on the relationship between childhood trauma exposure and undergraduate college success rates. Although the current study found some

evidence that as anxiety increased, undergraduate college success rates decreased, it was not a significant finding. This correlates with previous research that found that anxiety levels of undergraduate students influence their ability to succeed in a college setting (Brogden & Gregory, 2019). This study also concluded anxiety as a mediating factor between childhood trauma exposure and academic success was found not to be significant. More research is needed to fully understand this relationship since other research has shown that undergraduate students who experience increased anxiety due to changes in their behavioral inhibition system are known to have less goal-oriented behavior, which ultimately will affect their success in a college setting (Bruijnen et al., 2019). Understanding anxiety and its effect on an individual after childhood trauma supports God's word. God does not want us to experience high rates of anxiety; instead, he wants us to put our trust in Him, reducing rates of fear, paranoia, and uneasiness (Philippians 4:6).

Next, substance use is often present after childhood trauma as a coping mechanism for the feelings that have been internalized from their trauma (Barnert et al., 2020; Cabanis et al., 2021; Curran et al., 2021; Forster et al., 2018; Goodman, 2017; Kerig, 2019; Novais et al., 2021; Vaughan et al., 2021). Throughout the Bible, substance use is warned against due to altering your mind and decreasing your ability to be alert to the world around you (1 Peter 5:8). Thus, it was important to examine the influence of substance use on the relationship between childhood trauma exposure and undergraduate college success rates. This study concluded that as substance use scores increased, undergraduate success rates decreased, which was a significant finding. This validates other findings that discovered alcohol and substance use are significant barriers to college success (Vaughan et al., 2021). This study also concluded substance use as a mediating factor between childhood trauma exposure and academic success was found not to be significant.

More research is needed in this area since this finding conflicts with other research that discovered after exposure to just one childhood trauma, undergraduate students felt that substance use hindered their academic success (Hinojosa et al., 2019).

Last, the final mediating factor that was examined in the relationship between childhood trauma and undergraduate success rates was self-esteem. Childhood trauma changes an individual's feelings of guilt, shame, fear, and helplessness, which results in individuals experiencing lower self-esteem (Görg et al., 2019). Therefore, it was important to see how this influences college success rates. Although the current study had some evidence that as self-esteem decreased, so did undergraduate college success rates, it was not a significant finding. Other research has concluded that there is a significant relationship between self-esteem and an individual's ability to succeed in an academic setting (Brogden & Gregory, 2019), which indicates that more research is needed in this area. This study had a significant finding that self-esteem is a mediating factor in the relationship between childhood trauma and undergraduate success rates. The repercussions after childhood trauma exposure create a change in the individual's self-esteem that may hinder communication and relationships with others, ultimately disobeying God's wants for how one should experience their life (Romans 12:10). This finding brings new information into the field. Thus, further research is needed, and results should be observed with caution.

Further research on this topic is vital to increase awareness surrounding the lasting repercussions of childhood trauma and to promote the development of interventions that will support individuals to overcome the repercussions. Ultimately, God has placed each of us here to protect children and help them to grow closer to God throughout their lives, which means that it

is pivotal to prevent and find interventions for childhood trauma and give children the best chance to spend their lives following God (Mark 10:13-16).

Implications

This study emphasizes the importance of understanding the lasting repercussions that occur after childhood trauma exposure and identifying how those repercussions influence other areas of the individual's life, like undergraduate success. This study had theoretical and practical implications.

Theoretical

As previously mentioned**,** contemporary trauma theory (CTT) is a theoretical foundation that has been developed that guides how individuals are viewed after experiencing trauma (Herman, 1992; Mészáros, 2010). After exposure to childhood trauma, individual repercussions are not a sign of weakness, but instead, individuals are psychologically and physically injured (Goodman, 2017; Herman, 1992; Mészáros, 2010). The foundation of CTT focuses on how the biological, psychological, and social impacts of trauma on children last throughout adulthood (Goodman, 2017; Mészáros, 2010). The findings of this study support the basis of CTT by addressing the changes occurring to brain functioning and development after childhood trauma, which helps to explain why the relationship between childhood trauma and undergraduate college success rates exists. The negative correlational relationship that was discovered showed that as the frequency of complex childhood trauma increased, the rate of academic success amongst undergraduate college students decreased. This finding supported CTT's theory that changes occur to brain functioning and development after childhood trauma resulting in lasting repercussions. This finding also supports CTT's belief that proper interventions are needed after

childhood trauma exposure to support proper healing and growth throughout the individual's lifetime.

Practical

The findings of this study help to understand how complex the repercussions of childhood trauma can be. Childhood trauma is associated with many interpersonal and behavioral problems throughout life. While research has examined many effects experienced by childhood trauma, past studies have focused primarily on the development of mental health disorders (Aas et al., 2016; Connell et al., 2018; Curran et al., 2021; Jansen et al., 2016; Pham et al., 2021; Riber, 2017; Richard-Lepouriel et al., 2019) or adverse behaviors (Aas et al., 2016; Altintas & Bilici, 2018; Barnert et al., 2020; Berger et al., 2021; Carliner et al., 2016; Gorodetsky et al., 2016; Kerig, 2019; Malvaso et al., 2021; Marks et al., 2022; Schauss et al., 2019) without examining how these consequences can contribute to the difficulty of success during undergraduate studies due to these repercussions.

This study provided data on anxiety, substance use, and self-esteem as mediating variables in the relationship between the frequency of childhood trauma and college success rates in early adults. This study identified the impact complex childhood trauma has on early adulthood college success rates, which allows an understanding of repercussions from childhood trauma and the need to develop responsive early interventions that can help prevent the prevalence of lifelong consequences that mediate this relationship. Anxiety was examined as one of the mediating factors, and due to no results surrounding anxiety being significant, more research is needed in this area to fully understand if anxiety affects the relationships between childhood trauma and undergraduate success rates. Substance use was also examined as a mediating factor, and a significant finding was that as substance use increased, academic success

decreased, but more research is needed to understand its involvement as a mediating factor between childhood trauma and undergraduate success rates. This finding supports the importance for college organizations to implement substance interventions and increase the spread of knowledge surrounding the effects of substance use to undergraduate students. The final mediating factor of self-esteem was found to have a significant effect on the relationship between childhood trauma and undergraduate success rates. This finding suggests the importance of promoting interventions that will promote self-esteem growth in individuals who experience childhood trauma. Overall, more research is needed to fully understand these and other mediating factors that influence the relationship between childhood trauma and undergraduate success rates.

Limitations

Limitations

A limitation of this study was the dependence on self-report questionnaires to gain all data from participants. Therefore, it is possible that because it was self-disclosed, participants may have leaned towards the more socially acceptable answer rather than being entirely truthful, and the information gathered is not entirely accurate. Another limitation that was discovered while conducting this study was participants not finishing the full questionnaire. Due to gathering data online through self-disclosure, many participants would start the questionnaire but not complete it fully. Another limitation of this research design is that individuals have a lot to manage being undergraduate students and do not want to participate since it will add to their responsibilities.

Delimitations

The first delimitation of this study is that success rates during undergraduate studies were examined, not other levels of schooling beforehand, which can contribute to college success rates. The level of education and success experienced in high school and previous grades can contribute to how prepared an individual is to complete undergraduate studies. Also, the success rates in college can be influenced by many outside factors, which were not taken into account throughout this study. In addition, rates of anxiety, substance use, and self-esteem can be influenced by other life factors, not just childhood trauma, which was not examined throughout this study. The other delimitation of this study is that all participants were from one college and had to be between 18 and 24 years old. In addition, all participants were recruited through social media and had to be members of Facebook groups where the recruitment was posted. The participants being from a single Christian-based college, in a specific age range, and with access to certain Facebook groups does not allow the results of this study to fully be generalized to the entire population.

Recommendations for Future Research

This study was the first of its kind to examine how the frequency of complex childhood trauma contributes to individual rates of anxiety, substance use, and self-esteem, which ultimately influences academic success rates during undergraduate studies. Due to this study examining these mediating factors for the first time, further research is needed, and results should be observed with caution. Also, due to the small sample size and minimal reliability, the design of this study should be repeated with a larger sample size.

Future research should also examine other mediating factors that can help to understand the significant finding that as childhood trauma exposure increases, undergraduate college

success rates decrease. The mixed results amongst the current examined mediating factors are also worth revisiting in future research.

Summary

The purpose of this quantitative correlational research study was to examine the relationship between the frequency of complex childhood trauma experienced, rates of anxiety, substance use, and self-esteem, and undergraduate college success rates in early adulthood. This study utilized a quantitative correlational research approach to bring forth new knowledge surrounding the mediating factors that contribute to the relationship surrounding an individual's academic success being negatively impacted after experiencing childhood trauma. The mediating factors were independently examined to bring forth knowledge about how each contributes to the primary relationship examined.

It was found that there is a negative correlational relationship between childhood trauma and undergraduate success rates; as the frequency of complex childhood trauma increases, the rate of academic success amongst undergraduate college students will decrease. It was then examined how anxiety affects the relationship between childhood trauma and college success rates; it was found that anxiety does not contribute to that relationship. Substance use as a mediating factor resulted in mixed results. It was found that as drug use increased, college success decreased, but that substance use did not contribute to the relationship between childhood trauma and college success rates. Research then examined self-esteem’s mediating effect on the relationship between childhood trauma and college success rates; it was found that self-esteem does contribute to that relationship.

The knowledge gained throughout this study can help organizations and universities understand the importance of implementing interventions to help individuals who have been

exposed to childhood trauma succeed in an academic setting while also overcoming complex repercussions. The information found through this research provides a deeper understanding of how childhood trauma changes an individual's psychological and physical functioning throughout their lifetime, ultimately changing how they succeed in areas of their life, especially if early interventions are not implemented. It is essential to understand the lasting effects of childhood trauma to help individuals begin to overcome what was experienced and provide them the opportunity to succeed to their highest ability.

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APPENDIX A: RECRUITMENT SOCIAL MEDIA POST

ATTENTION STUDENTS: I am conducting research as part of the requirements for a Ph.D. in psychology at Liberty University.

The purpose of my research is to examine the relationship between complex childhood trauma and undergraduate success rates through the mediating factors of anxiety, substance use, and self-esteem. To participate, you must be between the ages of 18-24 and an undergraduate college student. Participants do not have to have previous exposure to childhood trauma. Participants, if willing, will be asked to complete an online survey that will take no more than 40 minutes. Participation will be completely anonymous, and no personal, identifying information will be collected.

If you would like to participate and meet the study criteria, please click here https://www.surveymonkey.com/r/LWDFS8X

A consent document is provided as the first page of the survey. The consent document contains additional information about my research. After you have read the consent form, please click the button to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

APPENDIX B: CONSENT FORM

Consent

Title of the Project: Childhood Trauma and Undergraduate College Success Rates: Examining the Mediating Roles of Anxiety, Substance Use, and Self-Esteem.

Principal Investigator: Keirsten Lipowski, Doctoral Candidate, Psychology Department, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be between the ages of 18-24, and an undergraduate college student. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to explore the relationship between childhood trauma and undergraduate success rates through the mediating factors of anxiety, substance use, and self-esteem.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Participate in an online survey that will take no more than 40 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include the promotion of the need for interventions after childhood trauma to support individuals exposed to childhood trauma to succeed in academic settings.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life. The risks involved in this study include the possibility of psychological stress from being asked to recall and discuss prior trauma. To reduce risk, I will provide referral information for counseling services, if needed, to Liberty University's Student Counseling Services (434-582-2651; studentcounselingservices@liberty.edu)

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records. Participant responses will be anonymous. Data will be stored on a password-locked computer. After five years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Keirsten Lipowski. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her, at [redacted] You may also contact the researcher's faculty sponsor, Dr. Gopaul, at [redacted].

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

APPENDIX C: DEMOGRPAHIC QUESTIONS

1. Are you between the ages of 18 and 24 years old?

__Yes

__No

2. Are you currently enrolled as an undergraduate student at a college or university?

__Yes

__No

3. What is your gender?

__Female

__Male

__Other; Not Listed

5. What is your race?

__ American Indian or Alaska Native

__ Asian

__ Black or African American

__ Native Hawaiian or Other Pacific Islander

__ White

APPENDIX D: CHILDHOOD TRAUMA QUESTIONNAIRE—SHORT FORM

Items

Note. Items presented in abbreviated form. (R) = reverse-scored item. Range of all variables = 1–5.

1 = never true; 2 = rarely true; 3 = sometimes true; 4 = often true; 5 = very often true.

I. Emotional abuse

- Called names by family
- Parents wished was never born
- Felt hated by family
- Family said hurtful things
- Was emotionally abused

II. Physical abuse

- Hit hard enough to see doctor
- Hit hard enough to leave bruises
- Punished with hard objects
- Was physically abused
- Hit badly enough to be noticed

III. Sexual abuse

- Was touched sexually
- Hurt if didn't do something sexual
- Made to do sexual things
- Was molested
- Was sexually abused

IV. Emotional neglect

- Felt loved (R)
- Made to feel important (R)
- Was looked out for (R)
- Family felt close (R)
- Family was source of strength (R)

V. Physical neglect

- Not enough to eat
- Got taken care of (R)
- Parents were drunk or high
- Wore dirty clothes
- Got taken to doctor (R)

The scores of each of the five subscales range from 5 to 25, and total scores for the CTQ-SF ranged from 25 to 125. Participants with scores higher than any of the following subscale thresholds were considered to have experienced childhood trauma: Emotional Neglect ≥ 10; Physical Neglect ≥ 8; Emotional Abuse ≥ 9; Physical Abuse ≥ 8; and Sexual Abuse ≥ 6

APPENDIX E: ACADEMIC SUCCESS INVENTORY FOR COLLEGE STUDENTS

Instructions:

Think of a course that you have taken within the past year that was the hardest or most difficult for you.

The following items reflect your attitudes and opinions, there are no correct answers. For all the following statements that refer to a specific class, please rate them with regard to the course you thought of above. For each statement, please honestly mark the response that best describes you.

Items

Note. (R) = reverse-scored item. Range of all variables = 1–7.

1 = Strongly Disagree; 2 = Moderately Disagree; 3 = Slightly Disagree; 4 = Neutral; 5 = Slightly Agree; 6 = Moderately Agree; 7 = Strongly Agree

I. Career Decidedness

- I am certain about what occupation I want after I graduate.
- I know what I want to do after I graduate.
- I am having a hard time choosing a major. (R)
- I am certain that my major is a good fit for me.

II. Internal Motivation/Confidence

- I got satisfaction from learning new material in this class.
- I enjoyed the challenge of just learning for learning's sake in this class.
- I felt confident I could understand even the most difficult material in this class.
- I was pretty sure I could make an A or a B in this class.
- I knew that if I worked hard, I could do well in this class.
- I worried a lot about failing this class. (R)
- I was pretty sure I would get a good grade in this class.
- I felt pretty confident in my skills and abilities in this class.

III. External Motivation/Future

- I needed to do well in this class to get a good job later on.
- This class will be very useful to me in my career.
- This class is important to my future success.
- I think in the future I will really use the material I learned in this class.

IV. General Academic Skills

- I studied the correct material when preparing for tests in this class.
- I worked hard to prove I could get a good grade.
- I tried everything I could to do well in this class.

- I worked really hard in this class.
- I kept a good study schedule in this class.
- I worked hard in this class because I wanted to understand the materials.
- I studied a lot for this class.
- I think I used good study skills when working in this class.
- I made good use of tools such as planners, calendars and organizers.
- I used goal setting as a strategy in this class.
- I was good at setting specific homework goals.
- I was well organized.

V. Lack of Anxiety

- I was nervous for tests even when I was well prepared. (R)
- Studying for this class made me anxious. (R)
- I got anxious when taking tests in this class. (R)

VI. Concentration

- It was easy to keep my mind from wandering in this class.
- I had an easy time concentrating in this class.
- I had a hard time concentrating in this class. (R)
- I got easily distracted in this class. (R)

VII. External Motivation/Current Time

- It was important to get a good grade in this class for external reasons (my parents, a scholarship, university regulations).
- I worked hard in this class because I wanted others to think I was smart.
- I needed good grades in this class to keep up my GPA.

VIII. Personal Adjustment

- Personal problems kept me from doing well in this class. (R)
- I would have done much better in this class if I didn't have to deal with other problems in my life. (R)
- I had some personal difficulties that affected my performance in this class. (R)

IX. Perceived Instructor efficacy

- I was disappointed with the quality of the teaching. (R)
- I did poorly because the instructor was not effective. (R)
- I would have done better if my instructor was better. (R)
- The instructor in this class really motivated me to do well.
- Anything I learned, I learned on my own. The instructor in this class was not a good teacher. (R)

X. Socializing:

- Sometimes I partied when I should have been studying. (R)
- My grades suffered because of my active social life. (R)
- I got behind in this class because I spent too much time partying or hanging out with my friends. (R)
- Sometimes my drinking behavior interfered with my studying. (R)

For each subscale, add up the total score, divide by the number of items included in that subscale and multiply by 14.28 so that the score is now on a scale of 1-100.

APPENDIX F: GENERALIZED ANXIETY DISORDER 7-ITEM

Items

Range of all variables = 0–3.

0 = not at all; 1 = several days; 2 = more than half the days; 3 = nearly every day.

Over the last two weeks, how often have you been bothered by the following problems?

1. Feeling nervous, anxious or on edge
2. Not being able to stop or control worrying
3. Worrying too much about different things
4. Trouble relaxing
5. Being so restless that it is hard to sit still
6. Becoming easily annoyed or irritable
7. Feeling afraid as if something awful might happen

GAD-7 total score for the seven items ranges from 0 to 21. 0–4: minimal anxiety 5–9: mild anxiety 10–14: moderate anxiety 15–21: severe anxiety

APPENDIX G: ALCOHOL, SMOKING, AND SUBSTANCE INVOLVEMENT SCREENING TEST

These questions will ask about your experience using substances in your life and in the past three months. Please remember that all responses are anonymous, and this information will not be able to be tracked back to you. Please be completely honest when answering these questions. These substances can be smoked, swallowed, snorted, inhaled, injected, or taken in the form of pills."

Question 1

In your life, which of the following substances have you ever used? No (0 points) / Yes (3 points)

- Tobacco products (cigarettes, chewing tobacco, cigars, etc)
- Alcoholic beverages (beer, wine, hard liquor, etc)
- Cannabis (marijuana, pot, grass, hash, etc.)
- Cocaine (coke, crack, etc.)
- Amphetamines (speed, Ritalin, ecstasy, X, diet pills, crystal meth, ice, crank, Dexedrine, etc.)
- Inhalants (nitrous, glue, paint thinner, poppers, whippets, etc.)
- Sedatives: just for the feeling, more than prescribed, or that were not prescribed for you. (sleeping pills, Valium, Xanax, tranquilizers, benzos, etc.)
- Hallucinogens (LSD, acid, mushrooms, PCP, Special K, ecstasy, etc.)
- Opioids (heroin, opium, Fentanyl, Oxycodone, OxyContin, Percocet, Vicodin, methadone, Buprenorphine, etc.)
- Any other drugs; Specify:

Patients who answer "no" to all questions are done. Patients who answer "yes" to any question should proceed to Question 2.

Question 2

In the past three months, how often have you used the substances you mentioned? Never (0 points) / Once or twice (2 points) / Monthly (3 points) / Weekly (4 points) / Daily or almost daily (6 points)

- Drug 1
- Drug 2
- Drug 3
- Etc.

Patients who answer "never" for all drugs on question 2 should skip to Question 6. All other patients proceed to Question 3.

Question 3

During the past three months, how often have you had a strong desire or urge to use the substance mentioned? Never (0 points) / Once or twice (3 points) / Monthly (4 points) / Weekly (5 points) / Daily or almost daily (6 points)

- Drug 1
- Drug 2

- Drug 3
- Etc.

Question 4

During the past three months, how often has your use of the substance mentioned led to health, social, legal or financial problems? Never (0 points) / Once or twice (4 points) / Monthly (5 points) / Weekly (6 points) / Daily or almost daily (7 points)

- Drug 1
- Drug 2
- Drug 3
- Etc.

Question 5

During the past three months, how often have you failed to do what was normally expected of you because of your use of the substance mentioned? Never (0 points) / Once or twice (5 points) / Monthly (6 points) / Weekly (7 points) / Daily or almost daily (8 points)

- Drug 1
- Drug 2
- Drug 3
- Etc.

Question 6

Has a friend or relative or anyone else ever expressed concern about your use of the substance mentioned? No, never (0 points) / Yes, in the past 3 months (6 points) / Yes, but not in the past 3 months (3 points)

- Drug 1
- Drug 2
- Drug 3
- Etc.

Question 7

Have you ever tried and failed to control, cut down or stop using the substance mentioned? No, never (0 points) / Yes, in the past 3 months (6 points) / Yes, but not in the past 3 months (3 points)

- Drug 1
- Drug 2
- Drug 3
- Etc.

Question 8

Have you ever used any drug by injection? (non medical use only) No, never (0 points) / Yes, in the past 3 months (2 points) / Yes, but not in the past 3 months (1 points)

- Drug 1
- Drug 2

- Drug 3
- Etc.

Scoring:

Substance	Risk Level		
	Low	Moderate	High
1. Tobacco products	0 - 3	4 - 26	27+
2. Alcoholic Beverages	0 - 10	11-26	27+
3. Cannabis	0-3	4-26	27+
4. Cocaine	0-3	4-26	27+
5. Amphetamine type stimulants	0-3	4-26	27+
6. Inhalants	0-3	4-26	27+
7. Sedatives or Sleeping Pills	0-3	4-26	27+
8. Hallucinogens	0-3	4-26	27+
9. Opioids	0-3	4-26	27+
10. Other - specify	0-3	4-26	27+

APPENDIX H: ROSENBERG SELF-ESTEEM SCALE

Instructions

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

Note. (R) = reverse-scored item. Range of all variables = 1–4.

1 = Strongly Disagree; 2 = Disagree ; 3 = Agree; 4 = Strongly agree.

- On the whole, I am satisfied with myself.
- At times I think I am no good at all. (R)
- I feel that I have a number of good qualities.
- I am able to do things as well as most other people.
- I feel I do not have much to be proud of. (R)
- I certainly feel useless at times. (R)
- I feel that I'm a person of worth, at least on an equal plane with others.
- I wish I could have more respect for myself. (R)
- All in all, I am inclined to feel that I am a failure. (R)
- I take a positive attitude toward myself.

Scoring:

Sum scores for all ten items. Keep scores on a continuous scale. Higher scores indicate higher self-esteem. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem.