A COMPARISON OF COMBAT VETERANS AND NON-COMBAT VETERAN'S PERCEPTIONS OF ADJUSTMENT TO COLLEGE

by

Cynthia Louise Lawrence

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

The purpose of this quantitative, non-experimental, causal-comparative, ex post facto study was to examine the differences in perceptions between combat veterans and veterans' adjustment to college based on the factors of belonging, social support, and student stress from the Veteran Adjustment to college scale. This study was important in order to determine how veterans adjust to college in order to attain degrees. This quantitative casual-comparative ex post facto design worked well due to the use of archival data, the variables could be organized into experimental groups; and the data was collected with a validated survey instrument. A MANOVA was used to analyze the data. The general population for the study was student veterans who attended college and universities in the United States (U.S.). The target population for this study is student veterans who completed the Veteran Adjustment to College Scale. The results of this study showed that there was a statistically significant difference between combat veterans' and non-combat veterans' perceptions of belonging as it pertains to adjustment to college. Future research should focus on determining the difference between academic belonging and campus belonging for combat veterans and non-combat veterans' adjustment to college.

Keywords: combat veterans, non-combat veterans, transition, student veteran, belonging, social support, and student stress

Copyright

Dedication

"Greater love has no one than this: to lay down one's life for one's friends (John 15:13)". This is dedicated to all the veterans in my life for your selfless acts to serve our country in times of peace and war. But, especially to five very important people veterans in my life. My son U.S. Army Ret. SFC Robert J. Lawrence Sr., you are missed more than you will ever know. You were a battle buddy to many, and you shared Jesus Christ with so many. We know that because they have reached out to tell us. You were a wonderful son, brother, husband, soldier, and father. Not a day goes by that I don't think of you. Heaven gained an angel on November 23, 2015, when God gathered you in his arms and you left this world for his. Grandpa, US Air Force TSgt Ret. Walter Meinders, February 14, 1931, to May 2, 2020. You will never know in this world the impact you had in my life, and that in the life of my husband. You accepted that I like my grandma, would follow my husband all over the world and there would be times that you could not see me. Your bear hugs and kisses on my cheek, as you left this world to be with Jesus "your friend". Did you tell him "It's been a good ride"? Grandpa thank you for believing in me and saying, "that girl sure is smart". To my Dad U.S Navy veteran Jim Wilson, thanks for giving me a home, a safe harbor to be raised in, for teaching me the value of honest hard work, and for living up to your promise to God as I was being raised to keep me in church. To my son Davin U.S. Air Force SSgt (active), get yourself in college you are a fast burner but to keep that Lawrence momentum going go get that degree. To My husband David U.S. Air Force SMSgt Ret., my God-given mate. I thank God every day for you. Your love and support transformed me. Who knew I would be here, a small-town girl who fell in love with a small-town boy? God and the Air Force have carried us all over the world, and I thank him for his many blessings that are sometimes obvious, and sometimes not so obvious. Finally, to my other boys oh how I love

you more than the world, let this be a testament to never give up on your dreams. Follow Jesus and you will receive your heavenly reward.

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List of Abbreviations

Student service member/veteran (SSM/V)

Post-Traumatic Stress Disorder (PTSD)

Combat Cognitive Fatigue (CCF)

Grade Point Average (GPA)

Service-Connected Injury (SCI)

Veteran Adjustment to College Scale (VAC)

Multiple Analysis of Variance (MANOVA)

Traumatic Brain Injury (TBI)

General Anxiety Disorder (GAD)

Permanent Change of Duty Stations (PCS)

prior learning assessments (PLA)

School certifying official (SCO)

Veterans Integration to Academic Leadership (VITAL)

The United States Armed Forces (USAF)

National Conference of State Legislatures (NCSL)

Veteran Affairs (VA)

National Veteran Education Success Tracker (NVEST)

Science technology engineering math (STEM)

Offices of Veterans and Military Services (OVMS)

North Carolina Student Transition Resource Initiative for Veteran's Education (NCSTRIVE)

Reduction in force (RIF)

National Aeronautics Space Administration (NASA)

adrenocorticotropic hormone (ACTH)

Writing Center Tutor Corps (WCTC)

Veterans Success Academy (VSA)

CHAPTER ONE: INTRODUCTION

Overview

The purpose of this quantitative, causal-comparative study was to explore the differences in perceptions of veteran adjustment to college among combat veterans and non-combat veterans. The results of this study will assist educational stakeholders, and student veterans in making decisions that may lead to improved targeted student veteran programs that promote belonging, social support and reduce student stress. Chapter one will discuss background topics of student veterans and the challenges they face in transitioning into the college setting. Included in this section was an introduction of the theoretical framework for this study that showed the dynamic relationship between student veterans and higher education and explained the need for empirical studies on factors that influence student veterans' adjustment to college. The problem statement, significance, and purpose of this research. The chapter concluded with the research question(s) and pertinent key terms and definitions.

Background

Student veterans encounter challenges when adjusting and transitioning to college (Alschuler & Yarab, 2018). Since 2005 there has been an influx of student veterans onto college campuses that has caused a surge in scholarly research on this population (Vacchi et al., 2017). It was recommended that research should be conducted on factors that affect veteran adjustment to college based on a veteran sense of belonging, social support, and student stress (Young, 2017; Young & Phillips, 2019). This research study investigated whether military service status combat veteran (those that have identified that they served in combat) vs. non-combat veteran (those who identify as a veteran who may or may not have served in combat) could accurately predict veteran adjustment to college based on the factors of belonging, social support, and student

stress. A combat veteran is defined as anyone who has served in combat (Castro et al., 2015) A non-combat veteran is defined as a service member with no history of combat (Johnson et al., 2010).

Institutions are experiencing a veteran enrollment increase with as many as 3.6 million benefits-eligible, post-9/11 veterans enrolling by the academic year 2019 (National Center for Veterans Analysis and Statistics, 2015). Student veterans enrolled in colleges and universities represent a diverse group of students. This diverse group of students may include active duty, Reserves or National Guard, retirees, combat veterans, and non-combat veterans. Some student veterans may not identify as veterans, could be stationed in the United States, or deployed abroad. These students could be taking classes online, in-person, or in a hybrid format (Robertson, & Eschenauer, 2020). A significant proportion of student veterans on-campus experience cognitive, psychological, and physical wounds from deployments and with no empirically developed measures that examine how veteran populations are adjusting to college life (Young, 2017). Student veterans who have experienced trauma during combat may present special behavioral health needs related to symptoms of post-traumatic stress disorder (PTSD). PTSD has been connected to lower academic performance and persistence and may impact educational self-efficacy (Barry et al., 2014).

Jones (2017) conducted interviews with student veterans who served in a combat zone during their deployment but there was no comparison with the experiences of student veterans who did not serve in combat while deployed. Student veterans often experience obstacles such as (frequent relocations, lack of social and family support, college integration conflicts, lack of clarity of tuition policies and payment options) (Livingston & Bauman, 2013). Student veterans can also suffer from physical and/or psychological disabilities (Ryan et al., 2011). Such obstacles

could inhibit degree completion or effective preparation for civilian employment, and, with such issues, that lead to a confusing academic process for student veterans in general (Wilson et al., 2016). Confusing bureaucratic processes, administrators who lack information about the population and student veterans' benefits, contentious interactions with peers and faculty, and a dearth of social support and academic services can position student veterans at increased risk for academic difficulty and dropping out (Griffin & Gilbert, 2015). Much of the stress experienced by student veterans can also be specific to their experiences in the military (Young, 2017). What follows is a historical synopsis of previous studies on student veterans.

Historical Overview

According to Livingston and Bauman (2013), research regarding student veterans in transition has resulted in several themes: (a) student veterans' navigation of dual identities, (b) student veterans' articulation of military and academic cultural differences, and (c) ways in which student veterans cope with transitions from activation to returning to college campuses. Student veterans may be experiencing military stereotypes and institutional labeling (Vacchi et al., 2017; Vacchi, 2012; Vacchi & Berger, 2014;), and need to adapt to an environment that is not structured like the military, and navigate a new level of freedom and autonomy (Kirchner, 2015; Kirchner & Pepper, 2020), feeling marginalized and preconceived bias of military service (Darcy et al., 2018), and possessing invisible wounds, such as moral or relational injuries (Flink, 2017; Parker et al., 2019) all of which can cause adjustment issues.

Society-at-Large

Osborne's (2014) qualitative study of military student-led town hall meetings emphasized a question-and-answer session that opened a forum to discuss the integration and transition issues student veterans were able to share based on their experiences when enrolling and

subsequent attendance at the University of Illinois. This suggests that student veterans could feel a disconnect between the military culture from which they have matriculated and the campus culture into which they are integrating. The higher education institution environment is markedly different than the military environment in structure, hierarchy, process, and purpose and the daily life of a student is fundamentally different from the life of a veteran (Young, 2017). Young (2017) stated that student veterans, like other students, experience stress related to schoolwork demands, home life demands, and internal struggles.

Previous studies have been limited in scope focusing either on student veterans at only one university or examining student veterans via a generalized perspective that cannot be applied to the current generation of student veterans, thus limiting the capacity to gather meaningful data. Background research on military student institutional choice found that during the college choice process, student veterans tended to select institutions based on financial considerations rather than institutional reputation, selectivity, or proximity (Evans et al., 2015). More research was needed about the overall satisfaction of student veterans as they transition from the military to college to career, incorporating research on student veterans' marital status, values, and responsibilities (Robertson & Eschenauer, 2020).

Without an empirical study to measure the effect of military service on veteran adjustment to college, there exist limits to the efficacy of those tasked with supporting them, such as higher education institutions, policymakers, veteran service providers, and other key stakeholders. The lack of research on how military service status can influence veteran adjustment to college for student veterans has resulted in a research gap. Thus, the research gap addressed in this study was the lack of empirical data about the effect of military status for veteran adjustment to college for the factors of belonging, social support, and student stress for

combat veterans and non-combat veterans attending higher education institutions in the United States.

Theoretical or Conceptual Background

This research required Schlossberg's transition and Lazarus and Folkman's stress and coping theory to be applied as a framework of study and perspective on which to focus student veterans coping with the transition. Wilson et al. (2016) described Schlossberg's (1981) model as an ideal framework for military student transition, exclaiming that the model highlights the need for student sense of control (situation), motivation development (self), building support networks (support), and developing skills (strategies). The research revealed a critical need for tailored support to enhance service member student transition (Callahan & Jarrat, 2014). Young 2017; Young & Phillips, 2019) and alluded that social support was an important factor, and the sense of belonging could help with the transition. Noser et al., (2018) asserted that the perceived availability of social support has resulted in protection against the pathogenic effects of stress.

Cole and Kim's (2013) research of student veterans determined unlike their civilian counterparts, student veterans are more likely to feel a sense of belonging from campus administrators and a more substantive connection with faculty members. Romero et al., (2015) study utilized Lazarus and Folkman's stress and coping theory as an effort to describe and explain that student veterans' ability to use coping measures could be hindered by PTSD, and that avoidance coping may prove to have theoretical links in an attempt to regulate upsetting stressors Investigating student veterans' coping styles, family social support and their associations with various psychiatric symptoms can provide important information to higher education institutions as to the available programs as a means to assist mental health treatment provision (Romero et al., 2015).

Problem Statement

There exists a gap in the literature to examine the differences between combat veterans and non-combat veterans' adjustment to college based on the factors of belonging, social support, and student stress There is a gap in research examining the unique experiences of student veterans (Young & Phillips, 2019). Further analysis and study that emphasizes the role of the family in student veteran transition are necessary (Young & Phillips, 2019). Research should continue to quantitatively measure the unique stressors and challenges or, conversely, the factors that contribute to the strengths of this population as they transition to college (Campbell & Riggs, 2015). Further research to examine the factors revealed in the Veteran Adjustment to College Scale exploratory factor analysis, belonging, social support, and student stress and how those factors influence grade point average (GPA), and retention of student veterans is critical to their future success (Young, 2017).

There is a justification for research investigating how student veteran disability affects transition to college and may help campuses critically investigate how to support veterans with a service-connected injury (SCI) and/or psychological issues resulting from combat (Morris, et al., 2019). Further research on sub-groups of veterans (e.g., veterans with dependents, veterans of color, first-generation student veterans, veterans with disabilities) is necessary to parse the veterans' experiences and to create services for those individuals whose needs and identities are subject to the intersection of salient categories (Jenner, 2017). "Despite the significant presence of student veterans on college and university campuses over the last seven decades, there has been a dearth of scholarly attention to the experiences of these students on college campuses" (Vacchi & Berger, 2014).

Further research is needed on student veterans to share about their combat experience but, instead, are nominally asked about the previous deployment to a combat zone and did not determine if that affected adjustment to college (Bodrog et al., 2018). The problem is more research was needed to examine the differences between combat veterans and non-combat veterans' adjustment to college based on the factors of belonging, social support, and student stress. (Bodrog et al., 2018; Campbell & Riggs, 2015; Jenner, 2017; Morris et al., 2019; Young, 2017; and Young & Phillips, 2019).

Purpose Statement

The purpose of this quantitative, non-experimental, causal-comparative, ex post facto study was to examine the differences in perceptions of veteran adjustment to college between combat veterans and non-combat veterans. This quantitative casual-comparative ex post facto design was appropriate due to the implementation of archival data and the impracticality of experimental groups. The data were collected with a validated survey instrument (Ary et al., 2006; Babbie, 2013; Gall et al., 2007). The general population included student veterans who attended institutes of higher education in the United States. The sample population for this study was combat veterans and non-combat veterans who completed the Veteran Adjustment to College Scale (Young, 2017). The independent variable that was utilized in this study was military service status combat veteran and non-combat veteran (anyone who identified as a veteran and not a combat veteran in the VAC). The dependent variable(s) that was utilized in this study was belonging, social support, and student stress. Perceptions of veteran adjustment to college were determined by using the respondent scores from the Veteran Adjustment to College Scale (VAC)

Combat veterans and non-combat veterans who volunteered to respond to this survey by way of the convenient snowball sampling process served to define the population to which the findings were generalized and met the pre-established conditions of Young's (2017) study. The results of this research study offered a better understanding of the influences of military service on combat veterans and non-combat veterans and adjustment to college in the United States based on the factors of the Veteran Adjustment to College Scale (belonging, social support, and student stress) and added invaluable perceptivity into the knowledge gap in the literature.

Significance of the Study

This study filled a gap and added to the body of scientific knowledge on student veterans' adjustment to college based on military veteran status. However, there was a gap in understanding how military service status can influence combat veteran and non-combat veterans' transition and a lack of empirical data on institutional support, specifically studies that focus on student veterans' adjustment to institutions of higher education. Student veterans, like other students, experience stress related to school-work demands, home life demands, and internal challenges. The stress experienced by student veterans who attend colleges or universities can also be specific to their experiences in the military (Young, 2017). This can also affect the efficacy of student veteran transition.

According to Young and Phillips (2019), many factors contribute to the transition from military life to campus. How well student veterans, who attend institutes of higher education, can transition from military service culture, and adjust to that of campus culture is crucial to their success. Even though research has been conducted, and despite the increased number of student veterans on campus, there remains a continued lack of understanding regarding this increasing population in colleges across the United States (Jones, 2017). Based on prior research gaps, there

was a lack of empiricism in the military student literature which has led to advocacy for quantitative research on the acculturation of veterans to campus life (Rumann & Hamrick, 2010; Vacchi, 2012; Vacchi & Berger, 2014).

The study was designed based on (Young, 2017; Young & Phillips, 2019) studies and sought to contribute to the current empirical findings to fill an important gap in research regarding the lack of data to determine if the differences between military service status could affect adjustment to college for student veterans based on the factors of the Veteran Adjustment to College Scale (belonging, social support, and student stress). The results of this study could provide the institution, stakeholders, and student veterans who attend institutes of higher education a better understanding of the stress and subsequent adjustment student veterans experience and may lead to improvement of veteran's support programs to increase retention (Young, 2017). This could also mitigate factors reducing student veteran attrition, allowing for degree completion, and improving financial solvency for the student veteran. A final potential benefit is an increased student veteran graduation rate for the institution and student veteran assimilation and investment in the community in which they reside as they potentially become future external stakeholders.

Research Question(s)

RQ1: Is there a difference in perceptions of veteran adjustment to college as measured by the Veteran Adjustment to College Sub-Scales between combat veterans and non-combat veterans?

Definitions

1. *Adjustment* – refers to a student's ability to adapt to the challenges faced in an academic setting (Credé & Niehorster, 2012).

2. *Combat veteran* -is defined as anyone who has served in combat (Castro et al., 2015) Combat veterans, are those that serve in any United States Armed Forces (USAF) branch and experience hostilities of any level or take part in an action of enemy combatant for a certain duration as a result of friendly, defensive, or offensive fire military action that involves a perceived or real enemy in a post- or pre-determined combat proceeding (VA.org., 2021).
3. *Human capital* is defined as the contributive qualities of humans as resourceful assets within an improving society; that often take the form of industrial or technological innovations, economic stimulation, or socially progressive movements toward a more equitable society (Phillips & Snodgrass, 2021).
4. *Military culture a*s defined by Burek (2018) is a culture in which values are spelled out and explicitly taught from the beginning such as sacrifice, honor, courage, duty, and service above self are which are common values shared by all service members; working as part of a team and being able to rely on those around them inspires a sense of pride, belonging, loyalty, and brotherhood known as esprit de corps.
5. *Military status* – was defined as National Guard/ Reserves, active duty, combat veteran, veteran (Young, 2017).
6. *Moral injury*- is defined as "a betrayal of what's right by someone who holds legitimate authority (a military leader)" (Shay, 2014).
7. *Non- Combat Veteran* -is defined as a service member with no history of combat (Johnson et al., 2010). Title 38 of the Code of Federal Regulations defines a veteran as "a person who served in the active military, naval, or air service and who was

discharged or released under conditions other than dishonorable, as long as they were not dishonorably discharged (VA.org., 2021).

8. *Posttraumatic Stress Disorder (PTSD)* is defined as experiencing a traumatic event and not having the ability to recover from the traumatic event (Leano et al., 2019).
9. S*tudent service member/veteran (SSM/V)*– veterans, service members, or former service members who have been discharged under honorable conditions that attend college or university (Mentzer et al., 2015).

CHAPTER TWO: LITERATURE REVIEW

Overview

The topic of this research project was the difference between combat veterans and veteran (student veterans') adjustment to college as measured by the factors of belonging, social support, and student stress from the Veteran Adjustment to College Scale. The belonging, social support, and student stress was the experience and perceptions of combat veterans and non-combat veterans in their pursuance of an ungraduated or graduate degree. This chapter provided a review of research literature relevant to the topic of the study. In the first section of the chapter, the theories that provided the framework for the study were reviewed, which included transition and stress and coping theories. Subsequently, the theoretical foundation covered how Schlossberg's transition theory (1981) and Lazarus and Folkman's stress, and coping theory (1984) established the premise of the research questions and how they aligned with current peer-reviewed research.

The second section provided a detailed review of previous research and literature that addressed the topics of the historical influx of student veterans, student veteran population (combat veterans, non-combat veterans), transition as defined by the 4 S's, belonging, social support (as explained by implications of being military-friendly and military student services). There was a thorough review of quantitative measurement and qualitative inquiry methods on student veterans, student veteran needs and military-friendly institutions, and military student services that built the foundational establishment of this study. Finally, there was a summary of the review of the literature and how studies and the literature review contributed to the knowledge base of the study.

Theoretical Framework

The theoretical framework that was the foundation for this study was Schlossberg's transition theory (1981) and Lazarus and Folkman's stress and coping theory (1984). In 1981 Schlossberg (1981), developed the theory on the transition that drew heavily from the work of several prominent social-learning and adult theory authors Lieberman (1975); Lipman-Blumen (1976); Parkes, (1971); and Lowenthal et al., (1975). Schlossberg's (1981) initial development of the model postulated that the three major sets of factors that influence adaptation to transition: (1) the characteristics of the transition, (2) the characteristics of the pre-and post-transition, and (3) the characteristics of the individual experiencing the transition.

Transition can be said to occur when an event results in change (Schlossberg, 1981). Schlossberg (1981) stated that this model would be moot or invalid without research and several research studies were conducted to validate the model. Schlossberg and Leibowitz (1980) utilized the transition theory model in a mixed-method study. The sample population was comprised of men who were employees of the National Aeronautic Space Administration (NASA). The participants of the study were men whose jobs were being eliminated due to a reduction in force (RIF). The entire group was surveyed, and 15 participants were interviewed twice, the first time a week after the announcement of the RIF and six months later. Schlossberg's transition model was applied to structure the interview questions, meaning each man was asked about his perceptions of the transition (role change, affect, timing, onset, duration, and degree of stress involved) (See Appendix C) about the interpersonal supports available to him before and after the job loss, and about his means of coping (Schlossberg & Leibowitz, 1980).

Study findings included that, predictably, stress was considered as the subjects viewed the termination of their jobs and this had been forced on them suddenly and had a strong negative impact as the uncertainty of how long each employee would remain unemployed (Schlossberg & Leibowitz, 1980). The first finding deemed important from this inaugural study was that NASA had supplied institutional support using counseling, job placement services, and workshops; due to this service, all men were able to gain a sense of control over their own lives and had found other jobs. This would suggest that institutional support can produce a positive effect on transition. The second finding was that the transition model offered a useful way to organize and collect interview data (Schlossberg & Leibowitz, 1980).

Schlossberg postulated that as a person transitions it requires a change in assumptions in how the individual perceives their situation, their self, and, thus, the requiring change in behavior and relationships established due to that change (Schlossberg, 1981). “It is not the transition itself that is the primary importance, but rather how that transition fits with an individual’s stage, situation, style at the time of the transition” (Schlossberg, 1981, p. 5). According to Schlossberg (1981), adaptation to transition is a process of moving past the transition and being preoccupied with the transition itself to integrating and focusing on the integration of the transition into his or her life.

Schlossberg’s transition theory has since been used and recently to explain several types of transition, for example, to explore doctoral students’ pathways through extracurricular programming (Coso & Sekayi, 2015), to study transitions and pathways of student-athletes (Flowers et al., 2014), and student veterans (Griffin & Gilbert, 2015; Main et al., 2016). As cited in Schlossberg’s (1981) seminal study, the theory has been so widely accepted through the years since the initial study that it is considered a transitional theory, not a model and has been cited in

1390 previous studies. Schlossberg's transition theory has also been connected in previous research on student veterans and is ideal to explain the transition of student veterans into a higher education institutional setting.

Schlossberg (1981) defined the four S's ---"situation," "self," "supports," and "strategies," (see below). Schlossberg has since developed this theory of transition for adult learners. In past research and seminal works, the theory became a common theme throughout the research to explain student veterans, the difference in military culture versus campus culture, their entrance into higher education institutions, and the challenges they encountered as a diverse student population trying to integrate and transition into higher education. As student veterans progress through this unique life and career transition, they must cope, adapt, and make decisions across many areas of their lives (Schlossberg et al., 2012). Schlossberg et al.'s, transition theory (1995) was applied by Griffin and Gilbert (2015) as an extension of DiRamio and Jarvis's (2011) study implemented Schlossberg's transition theory to translate extant research on student veterans into recommendations for practice, specifically for personnel working with this population; yet it was argued by Griffin and Gilbert (2015) that little empirical work was framed by this theory.

Wilson et al. (2016) applied the theory as a basis for their study stating that the model highlights the need for student sense of control (situation), motivation development (self), building support networks (support), and developing skills (strategies). Research revealed a critical need for tailored support to enhance military student transition (Callahan & Jarrat, 2014). Wilson (2014) and colleagues found that the military student participants noted that support of their educational pursuits from their unit command was important to them when pursuing their education. Although numerous adult learning theories can be applied, the issue of transition can

be best explained by the utilization of Schlossberg's transition theory and was recommended from very prominent studies by Anderson and Goodman (2014), Griffin and Gilbert (2015), and Wilson et al. (2016). Transition is a process that occurs over time rather than at an immediate point in time (Osborne, 2014).

The critical use of this theory by major researchers of student veterans led to form the theoretical foundation for this quantitative causal-comparative ex post facto study. The rest of this section will be dedicated to explaining how the problem under investigation is relevant to the theory that has been chosen based on the alignment of the research questions and how the theory lends itself to guide the research and explain the phenomena. There will be an accounting of the historical basis for each theory and model, a discussion of past seminal works, and an overview of recent literature on the theory and how it is relevant to the study.

Schlossberg's Transition Model

DiRamio et al. (2008), studied student veterans returning to the classroom employing the components of Schlossberg, Goodman, and Anderson's theory on adult transition. Diario and colleagues used Schlossberg et al., Moving In, Moving Through, Moving Out (1989) model of adult transition to describe student veterans' transition from the military to college theoretically (Livingston, & Bauman, 2013). This is a relevant theory to apply because modern student veterans face challenges with transitioning to civilian life that can include issues such as homelessness, disabilities, broken relationships, and other barriers furthering their education (Anderson & Goodman, 2014).

Many of the researchers agree that student veterans transitioned into the military by joining, progressed through the military by serving in combat and by being deployed, experienced memorable events, expressed a desire to earn their college education, as well as how

they transitioned out with the aid of programs (Anderson & Goodman, 2014; Griffin, & Gilbert, 2015; Jones, 2017; Livingston, & Bauman, 2013). “Although each branch of the service provides pre-separation counseling and transition services, these interventions tend to be short-term and focused on initial job search activities” (Anderson & Goodman, 2014, p.40).

Many student veterans are experiencing a constant dynamic tension as they transition from a previous state (service member) to several simultaneous current states (college student, civilian, employee, spouse, parent) all while creating and recreating their identities along the way (Jones, 2017). Even with existing separation services provided by the military, many transitioning to civilian life report continued or even worsening issues, including anger outbursts, Post Traumatic Stress Disorder (PTSD), sustained substance use, and strained family relationships (Derefinko et al., 2019). Many veterans note numerable challenges to re-adjusting to civilian life (Galman, 2020). In a quantitative study and survey of over 700 institutions, Cook and Kim (2009) found that a) only 22% provided transitional orientation specifically for veterans, b) only 4% offered veteran-specific orientation, c) nearly 50% of colleges did not employ an individual trained to assist veterans with transitional issues, d) 57% did not provide training for staff and faculty about veteran transitional assistance, and e) less than 37% of colleges and universities had trained staff to assist veterans with disabilities (Ryan et al., 2011).

Schlossberg, Goodman, and Anderson’s transition theory and model apply to (combat veterans and non-combat veterans) student veterans and the research questions developed in this study. Schlossberg’s theory provides a framework for understanding how psychosocial backgrounds influence college classroom experiences and they offer a foundation for understanding student veterans’ college transition. More specifically researchers have applied components following DiRamio et al.’s (2008) work to further the body of research on military

student transition into higher education. Griffin and Gilbert (2015); Livingston, and Bauman, (2013); Osborne (2014); Rumann, (2010); and Wilson et al. (2016), all utilized four broad coping categories as it pertains to military students in transition- "situation," "self," "supports," and "strategies," commonly referred to as the 4 S's. Although Schlossberg's model has not been widely applied to frame empirical work on student veterans, this theory and its relevant research details that the 4 Ss' could be related to each factor in detailing the assets and resources to which student veterans have access and the acute challenges, stressors, and anxieties they encounter in the transition from the military into higher education. It is of critical importance for schools to provide appropriate support and transition services to empower student veterans' ability to adapt and succeed under various conditions (Griffin & Gilbert, 2015; Olsen et al., 2014; Wilson, 2014).

Stress and Coping Theory

Using the concept of the flight or fight response, stress was first defined as a physiological response that triggers the body to utilize the sympathetic nervous system. Physiologically when an organism is presented with a stressful stimulus, it responds by either fighting it or running away (Lazarus & Folkman, 1984). In a quantitative study assessed subjects' emotional states at the beginning and end of several stressful encounters, Folkman, and Lazarus (1988) focused on the amount and direction of change as a function of the coping strategy reported. Folkman and Lazarus (1988) found that some coping strategies, such as positive reappraisal and planful problem solving, were found to be associated with changes in emotion from negative to less negative or positive, while other coping strategies, such as confrontive coping and distancing, correlated with emotional changes in the opposite direction, that is, toward more distress. In a proceeding study Folkman et al., (1986) noted that subjects reported

on a multiple-choice scale that the stress had either been a) unresolved or made worse, b) not changed, c) resolved but not to their satisfaction, d) resolved but improved, or e) resolved to their satisfaction. It was noted that satisfactory outcomes were defined as those rated as unresolved but improved (d above) or resolved to their satisfaction (e above) (Folkman et al., 1986).

According to Lazarus (1966), stress is when an individual perceives that he or she cannot adequately cope with the demands being made or with threats to his or her well-being. Lazarus's coping theory has been established for over 70 years, and, in 1993, Lazarus wrote a 50-year analysis of the coping theory, past, and present, to discuss stress and coping as a historical aspect. This theory is quite appropriate to combine with Schlossberg because it not only discusses coping but how stress affects an individual.

For someone who is stressed, it does not have to be a dangerous or harmful trigger to cause a physiological release of adrenaline. In expanding upon the work of Sapolsky (2005), Bohan (2018) the sympathetic nervous system activates during emergencies, or what one thinks are emergencies. When life is alarming, the sympathetic nervous system activates and releases adrenaline (epinephrine and norepinephrine) during times of stress. Heart rate and blood pressure are directly influenced as these hormones are secreted into the blood (See Appendix D) (Van Putte et al., 2017).

Negative effects of stress include an increase in blood pressure and heart rate and can also decrease the function of the immune system (Van Putte et al., 2017). Chronic stressors can perform the same action. The effects of prolonged stress can hurt cardiovascular function, causing elevated heart rate, platelet aggregation, a higher circulation of cholesterol, and vasoconstriction of damaged coronary arteries (Sapolsky, 2005). Prolonged stress can cause immunosuppression (Sapolsky, 2005). Chronic stressors are long-term stressors and can be

transactional. In the psychological field, stress equals the demands of an individual's external and internal environment that are perceived to be threatening or harmful threatening (Lazarus & Folkman, 1984).

External or environmental stress is a primary stimulus for the release of adrenocorticotropic hormone (ACTH) which, in turn, releases the principal chronic stress hormone cortisol (Van Putte et al., 2017). Fundamentals of the stress and coping theory emphasize chronic stressors as role strains, daily hassles, persistent life difficulties, community-based strains, or chronic strains. From a physiological and environmental perspective, stress is transactional. For a student veteran, they are often carrying multiple roles that of college student, and breadwinner.

The transactional model of stress and coping examined the interaction between a person and his or her environment and the stress, as a result, forms an imbalance between demands and resources (Lazarus & Folkman, 1984). Student veterans, like other students, experience stress related to schoolwork demands, home life demands, and internal struggles (Young, 2017). Thus, according to Lazarus and Folkman (1984), individuals become stressed when demands or pressure exceed their resources or their ability to cope and control the stress.

How a person copes becomes more important than the event eliciting stress. According to Dusselier et al. (2005), if a person is unable to cope effectively with the stressors in his or her life, it can lead to poor grades, sickness, and failing relationships. Lazarus and Folkman (1984) defined coping as "the cognitive and behavioral efforts to master, reduce, or tolerate the internal and/or external demands that are created by the stressful transaction" (Lazarus & Folkman, 1984, p. 843). According to Lazarus and Folkman (1984), in social psychology, these efforts are

commonly considered situational, triggered by demands, and it is recognized that individuals respond to these demands in different ways.

According to Martin and Daniels (2014), when some individual encounters a stressor transaction, he or she determines a primary appraisal, the person considers whether their goals are thwarted. Furthermore, appraising the significance or level of the stressful transaction with the environment can result in an assessment of the stressor as an insignificant, benign-positive, or a harmful threatening challenge transaction. The secondary appraisal focuses on determining the best approach to deal with the situation and change the undesirable condition (Martin & Daniels, 2014). The individual evaluates his or her external and internal coping options and resources to create a more positive environment. Internal options may include willpower or inner strength and external options may be peers, professional help, family (Martin & Daniels, 2014). After the transaction is appraised, then coping strategies can be explored.

Problem-based coping is applied in situations where an individual feels a lack of control in the situation and can manage the source of the problem (Martin & Daniels, 2014). An individual will attempt the problem-based coping strategy to change negative emotions and stress. Alternatively, an individual may attempt to avoid, distance, accept or seek emotional support to avoid negative appraisal or demands. Emotional-based coping may be implemented when individuals feel they have little control over their situations and are unable to handle or manage the source of the problem (Martin & Daniels, 2014), and is considered a more passive approach known as selective coping (Hewett et al., 2018). It is important to recognize that student veterans may be coping with both psychological and physiological injuries from military service (Young, 2017). Thus, being able to cope with perceived stress involves not only physiological factors but psychological factors as well.

In summation, the transition theory of Schlossberg, developed a formidable theoretical foundation for this study in understanding that student veterans may utilize the 4 S's to transition "situation," "self," "supports," and "strategies," as well as Lazarus and Folkman's (1984) stress and coping theory to understand how student veterans respond to perceived stress and apply support and strategies to utilize problem and emotional-based coping mechanisms in their experiences in higher education. Schlossberg also borrowed from Lazarus and Folkman's (1984) study to develop the 'S' strategies. Schlossberg (1981) cited three main coping responses identified in Pearlin and Schooler's (1978) study: "responses that modify the situation, responses that control the meaning of the problem, and responses that help the individual manage stress after it has occurred to help accommodate to existing stress without being overwhelmed by it," (p. 89). Four coping modes Schlossberg utilized from Lazarus and Folkman's stress and coping theory (1984): "direct action, inhibition of action, information seeking, and intrapsychic behavior" (p. 91).

Student veterans must often move (transition) in, move (transition) through, and move out of life situations (transition) (persistent life difficulties), (chronic strain) and must psychologically deal with two personas (role strain and community-based strain) simultaneously that of the service member and the military student. They must perform this while analyzing each stress transaction and find coping strategies and support while trying to earn a degree. This was further expanded upon by Minnis, et al. (2013) who stated that through social learning in a community, people learn through their interactions with others.

Related Literature

The literature review for this study was based on the variables: the historical influx of student veterans, student veteran population (combat veterans, non-combat veterans), what it means to be a combat veteran (what they see, what went through, and the ramification of that experience), transition as defined by the 4 S's, belonging, social support (as explained by implications of being military-friendly and military student services). There was a thorough review of quantitative measurement and qualitative inquiry methods on combat veterans and student veterans, student veteran needs, military-friendly institutions, military student services that built the foundational establishment of this study. Finally, there was a summary of the review of the literature and how studies and the literature review have contributed to the knowledge base of the study.

Historical Influx

The higher education community provides one of the significant benefits to the nation and our military families, educating the next generation of engaged citizens and leaders, student veterans, veterans, and their family members (Snead, & McBain, 2018). During the Cold, War education started to see a shift towards public funding and an infusion of money that started with the GI Bill that was carried on through the Higher Education Act (Goldrick-Rab & Labaree, 2021).

> "Here, for the first time, there was a public rationale for higher education. We were supplying the technology and science for the space race and the arms race. We were also in an ideological war, showing that democratic capitalism could provide

> enormous opportunity for everyone, and not just for the few" (Goldrick-Rab & Labaree, 2021).

As the federal government provided grant aid to students of all ages, with grant awards keyed to the ability of families and students to pay, by the mid-1970s many of the major elements of support for higher education and governmental provision were in place (Snead & McBain, 2018).

This educational mission has become more prominent in recent years with the passage of the current iteration of the General Issue (GI)Bill (Snead, & McBain, 2018). With the three connected ideals during the past 30 to 40 years 'globalization,' 'competitiveness,' and the rise of the 'knowledge-based economy'; one field in which all three have resonated strongly is that of higher education" (de Bengy Puyvallée, & Bjørkdahl, K., 2021; Zumeta, et al., 2021). The next resonating theme is that training and educating the next generation is paramount to maintaining the edge; the economic and functioning prosperity depends on its physical and human capital stock. When an individual uses intellect, capability, and skill to make up the labor force of an industry or economy is known as human capital (Dhar et al., 2019).

Without the existence of human capital, it is quite challenging to handle other physical resources (Dhar et al., 2019). Human capital is defined as the contributive qualities of humans as resourceful assets within an improving society; that often take the form of industrial or technological innovations, economic stimulation, or socially progressive movements toward a more equitable society (Phillips & Snodgrass, 2021). Student veterans are that large influx of human capital.

Due to the wars in Afghanistan and Iraq, the United States has seen the largest growth in student veterans and the largest influx of potential human capital into our higher educational

institutions in years. Many of these student veterans are opting to go into higher education institutions and the post-9/11 G.I. Bill has allowed for that. The Veterans Education Assistance Act, or Post-9/11 G. I. Bill, was passed in 2008; and provides up to 36 months of financial support for education to honorably discharged veterans (Dortch, 2017). Between the years 2007 to 2017, federal spending on veterans' higher education benefits grew by nearly 250 % primarily because of the Post-9/11 GI Bill (Correll, 2019). The enrollment effect of the Post-9/11 GI Bill has resulted in increased college enrollment and has waned in recent years (Zhang, 2018) The Post-9/11 GI Bill has had a positive and consistent impact on college enrollment among veterans ranging from 20 to 60 years old (Zhang, 2018). This trend has been consistent across different levels of educational attainment, with the largest increase observed among those already holding advanced degrees (Zhang, 2018).

Student Veterans

Little is known about student veterans an emerging population in higher education institutions. Robertson and Eschenauer, 2020, cited the empirical research of Vacchi 2012, as defining student veterans as a student population to include active duty, those separated from the military, those in the Reserves or National Guard, retirees, and those who served, yet don't identify as veterans. Student veterans would also include military-affiliated students that regardless of deployment status, combat experience, legal veteran status, or GI Bill use attend colleges or universities (Vacchi, 2012).

When compared to traditional colleges students, student veterans are older, twice as likely to have a job, and have life experience before starting college (U. S. Department of Veteran Affairs, 2020) Student veterans may have issues fitting in with other college students because they cannot find like-minded peers (U. S. Department of Veteran Affairs, 2020). Due to

the increased enrollment of student veterans, it is critically important to understand who student veterans need and understand how past experiences can impact their learning and successful transition (Morris et al., 2019). Student veterans are an important theme to the review of literature because student veterans are one of the fastest-growing subpopulations of non-traditional students. As many as 3.6 million benefits-eligible Post-9/11 GI Bill veterans enrolled by (Morris et al., 2019)

Student veterans' success is a concern because as they depart from their military service into college and then their civilian life, they need to have the support that is tailored to more of the individual than the definition (Vacchi et al., 2017). The National Center for Education Statistics (NCES) recognizes that no single definition captures nontraditional students. Vacchi (2012) stated that a common and inclusive definition for student veterans has been elusory at best due to historical, legal, and perception challenges. Thus, some variables are often connected to nontraditional students which would include age, the point at which they enter higher education, employment, and financial status; although student veterans reflect several of these characteristics (U.S. Department of Veteran Affairs, 2020).

Military experience also seems to have equipped student veterans with a different type of maturity than that generally observed in more traditional college-aged students, which resulted in difficulties connecting with other students and, at times, diminishing class participation (U.S. Department of Veteran Affairs, 2020). Student veterans are often older than their student peers, may support families at home, may have significant work commitments outside of school, maybe less involved in campus activities, and feel isolated from the campus community than traditional college students (U.S. Department of Veteran Affairs, 2020). Military service generally assists student veterans in developing the skills and, more importantly, the confidence to plan for

success, and they possess their definition of successful career transition, which may not align with institutional missions of retention, graduation, and engagement (Robertson & Eschenauer, 2020). Student veterans have likely traveled outside of the United States and have experienced more exposure to different lifestyles than their nonveteran peers (Kranke, et al., 2016).

Many of these student veterans are student veterans (62%) are first-generation college students (U.S. Department of Veteran Affairs, 2020). Student Veterans report more severe posttraumatic stress disorder, pain, fatigue, and depression, than compared to their civilian counterparts (Kinney et al., 2020) Service-related conditions can hurt academic performance for student veterans (Kinney et al., 2020). Student veterans may also need remediation (Jenner, 2017).

According to the United States Department of Veteran Affairs (2020), only 15% of student veterans are the traditional age of college students, and between the ages of 24–40. A large percentage 47% of student veterans are parents, and 47.3% of student veterans are married (U.S. Department of Veteran Affairs, 2020). From the group of the student veterans who began utilizing VA education benefits in 2017, 52% were enrolled in an undergraduate program, 24% in a two-year school, 9% in a graduate program, and 15% in a nondegree, vocational, or technical program (VA. Org., 2021). Student veterans are seeking an education to improve the quality of life for themselves and their families (U.S. Department of Veteran Affairs, 2020). Another trend in the military is an increase in women and minority service members.

According to the National Center for Veterans Analysis and Statistics (NCVAS) (2017), the number of women entering the military is expected to increase to an average of 18,000 per year over the next ten years. When compared to their male counterparts, the largest cohort of women have served during the post-9/11 era (NCVAS, 2017). In 2015, women veterans

represented 9.4% of the total veteran population, and it is estimated that by 2043, that population will increase to 16.3% (NCVAS, 2017). Blacks comprise 14.6% of the veteran population (NCVAS, 2017). The Hispanic population in the military is also steadily growing. Hispanics comprised 2.8% during World War II, 4.4 % as of the Korean conflict, and their numbers have markedly increased over time to 13.5 % of the total veteran population in the United States as of 2017 (NCVAS, 2017). A higher percentage of females have attained and were enrolled in higher education than male veterans (NCVAS, 2017).

Some of these student veterans are single parents and may need childcare facilities on campuses to persist toward degrees. Due to the transient nature of military service, student veterans may not have the familial support base as they would if they were attending colleges in their hometowns. Thus, models of attrition among students with adult roles and responsibilities, like student veterans, must be sensitive to variation in the importance of social integration and variation of institutional support for students with family responsibilities (Jenner, 2017).

Combat Veterans

A subset of the student veteran population is combat veterans that may have incurred physical injuries and/or mental illness because of their service. The Department of Defense (DOD) in 2017 reported that more than 15,000 veterans had been diagnosed with TBI diagnoses among military service members, and researchers have estimated that 10–20% of Veterans experience a TBI during deployment (Martin et al., 2018). TBI is also known to cause dementia (Peterson et al., 2019). Based on the most recent data available from the Defense and Veterans Brain Injury Center (DVBIC), there has been an estimated 376,724 service members (SMEs) that have been diagnosed with at least one TBI. (Agimi et al., 2019). Traumatic brain injury (TBI) is defined as an alteration in brain function, or other evidence of brain injury, caused by an external

force or trauma and the U.S. Government estimates that 19% of combat veterans may suffer from this (U.S. Department of Veteran Affairs, 2018). One debilitating result of mild traumatic brain injury (mTBI) is cognitive fatigue: fatigue following cognitive work (Wylie, & Flashman, 2017).

Combat Cognitive Syndrome

Combat cognitive syndrome was first researched by Smee et al., 2013. TBI research has shown that those that have suffered from a traumatic brain injury also complain of fatigue and mental fatigue. Combat cognitive syndrome is another emerging concept that describes combat-based TBI-lowered mental efficiency. Combat-based concussion fatigue is suggested to lead to "cognitive burn-out" and prolonged recovery time (Smee et al., 2013)**.** Fatigue has been defined as a subjective lack of physical and/or mental energy that is perceived by the individual or caregiver to interfere with usual and desired activities' (Multiple Sclerosis Council for Clinical Practice Guidelines, 1998).

This mental or cognitive fatigue can have devastating effects on combat veterans who are attending higher educational institutions. Deficits for combat veterans result in an inability to "bounce back" from mental fatigue triggered by sustained concentration, as required for testing, note-taking, and engaging in a collegiate learning environment due to concussive trauma received in combat (Smee, et al., 2013). Physical symptoms include headache, confusion, and fatigue. These disabilities (PTSD and TBI) may adversely affect afflicted student veterans' psychological stability and learning capabilities (Taylor et al., 2016). According to Alosco et al. 2021, many veterans are experiencing another phenomenon that cannot be confirmed till after death during an autopsy, and that is chronic traumatic encephalopathy (CTE).

Chronic Traumatic Encephalopathy (CTE)

Due to TBI, many combat veterans may also suffer unknowingly from CTE. CTE is a type of brain injury that historically has been seen in football players and boxers often cited as "rang my bell, or "punch drunk". CTE is defined as neuropathy that is the result of exposure to repetitive head impacts and the resulting repeated concussions and sub-concussive trauma. Reports about cases of Chronic Traumatic Encephalopathy (CTE) in active-duty service members (Alfonsi, 2018) have seen an uptick in recent years. Joy Keiffer buried her son Sgt. Kevin Ash in the summer of 2017 (Alfonsi, 2018).. His mother described that when he returned home in 2012, he was a different man (Alfonsi, 2018). Sgt. Kevin Ash enlisted in the Army Reserves at the age of 18, and throughout three deployments, he was exposed to 12 combat blasts, many of them roadside bombs (Alfonsi, 2018). Sgt. Ash's mother donated her deceased son's brain to science and what was discovered is that her son suffered from CTE. Ms. Keiffer's willingness to be open about her son's death and subsequent postmortem diagnoses has caused an increase in public awareness and concern about risk factors that cause CTE and has raised questions about if/how CTE is related to early-onset dementia and other chronic neurodegenerative diseases (Alfonsi, 2018). Ms. Keiffer and Ms. Alfonsi's *60 minutes* interview excerpt is below.

> *Joy Kieffer*: His whole personality had changed. I thought it was exposure to all of the things that he had seen, and he had just become harder. You know, but he was -- he was not happy.
>
> *Sharyn Alfons*i: So, at this point, you're thinking this decline, this change in my child is just that he's been in war and he's seen too much.
>
> *Joy Kieffer*: Right.

Sharyn Alfonsi: Did he tell you about blasts that he experienced during that time?

Joy Kieffer: Uh-huh.

Sharyn Alfonsi: What did he--tell you?

Joy Kieffer: That they shook him. And he was having blackouts. And -- it frightened him. Ash withdrew from family and friends. He was angry. Depressed. Doctors prescribed therapy and medication, but his health began to decline quickly. By his 34th birthday, Sgt. Kevin Ash was unable to speak, walk or eat on his own.

Sharyn Alfonsi: Looking back on it now, was there anything you feel like he could've done?

Joy Kieffer: Uh-uh.

Sharyn Alfonsi: Because?

Joy Kieffer: Because it was-- it-- it was his brain. The thing I didn't know was that his brain was continuing to die. I mean, before he went into the service he said, "you know, I could come back with no legs, or no arms, or even blind, or I could be shot, I could die," but nobody ever said that he could lose his mind one day at a time.

Sgt. Ash's final wish was to serve his country one last time by donating his brain to science -a gesture he thought would bring better understanding to the invisible wounds of war (Alfonsi, 2018). This has increased the urgency to better understand how TBI may increase the risk of CTE specifically, as well as other neurodegenerative conditions in general (Alfonsi, 2018). Everyone has tau protein in their brain, in their nerve cell. The function of tau protein is to provide structure. But after trauma for an individual who has CTE the tau protein starts clumping up as a toxin inside the nerve cell, and over time cause the nerve cell to die (Alfonsi, 2018).

Another side effect of TBI that has been shown in combat veterans is dementia. TBI-mediated dementia is not a new phenomenon of study. Historically the research dates to World War II. TBI mediated dementia. Many 9/11 combat veterans who volunteered after 9/11 have been deployed at least once. Though, the reality of military service, particularly when it involved combat, has left some veterans struggling with moral or ethical dilemmas about what they witnessed or participated in, also known as moral injury (Parker et al., 2019).

Moral Injury

Moral injury occurs and is defined as "a betrayal of what's right by someone who holds legitimate authority (a military leader)" (Shay, 2014). After drawing from over 20 years of experience working with Vietnam-era veterans, physician-researcher is the leading empirical researcher on moral injury as defined by veterans in particular combat veterans. Jonathon Shay was the first to publish material on the phenomenon of moral injury (Blinka & Harris, 2016). Richardson et al., 2020, in the systematic review also quoted Jinkerson (2016) in defining moral injury to be an experience in which "a particular trauma syndrome including psychological, existential, behavioral, and interpersonal issues that emerge following perceived violations of deep moral beliefs by oneself or trusted individuals (i.e., morally injurious experiences)".

Richardson et al., (2020) conducted the study to determine if (a) service members and veterans were engaged in defining moral injury and (b) to better discern past researchers' methods and designs for defining moral injury. Richardson et al., (2020), stated that an empirically supported definition would strengthen and validate any future studies in promoting validity and reliability if there was a clear concrete definition of moral injury. Nine existential themes came from the systemic study of moral injury as defined: ethics (personal, and general),

betrayal, orientation, reconciliation, high-stress environment, spiritual wound, and psych behavioral wound.

Ethics referred to how a veteran's ethics are tested as to what is right and wrong, many of the ethical dilemmas as to what is considered morally right and wrong, and a subjective definition of right and wrong and transgressions into that moral realm. Betrayal was highlighted as a sense of betrayal at either the intrapersonal or interpersonal level, with some suggesting that both occur simultaneously: as an intrapersonal betrayal or violation of one's core values or personal belief system based on the rules and values by which one was raised (Richardson et al., 2020).

Betrayal was perceived as either from another individual or from a person of authority figure (military leader or commander) (Richardson et al., 2020). Orientation referred to what was the origin or root cause of the moral injury (Richardson et al., 2020). Orientation to the moral injury as a result of either "(a) ones' perception or meaning of morality and beliefs (i.e., perception-oriented) or (b) one's encounter with a morally injurious event (action-oriented)" (Richardson et al., 2020).

Reconciliation referred to how does one set about restoring one's belief system after moral injurious violations have occurred; suggesting that moral injury stems from "unworkable attempts to manage, control, or cope" (Farnsworth et al., 2017). with the pain "that exceeds the information-processing capacity" (Nash et al., 2013). Sayer et al., (2014) suggested that it is not just the ethical transgression or the violation of values that causes the moral injury but also the inability to deal with or make sense of one's experience that may exacerbate the depth of such injuries. High stakes lead to a high-stress environment. When one's deep core of moral belief is disrupted or intruded upon that can cause spiritual wounding such as those that have been raised

to value human life and not cause harm to others is therefore ordered to go against those ingrained principles and thus cause harm or must kill someone (Richardson et al., 2020).

Psychobehavioral wounding is the result of the existential challenges that may arise from moral injuries, shame, meaninglessness, experiences of guilt, remorse, anger, self-handicapping (beating oneself up psychologically), demoralization, and social and behavioral issues were all highlighted within key definitions as potential symptoms or outcomes associated with moral injury (Richardson et al., 2020). The limitations of the Richardson et al., 2020 research study were that is specifically focused on military and veteran populations, but the moral injury is not unique to only these populations. Future research should explore a similar analysis related to the experiences of moral injury among other groups that are commonly predisposed to traumatic stress, and more research is needed to further refine the definition of moral injury as related across multiple populations. Due to experiences in combat, many student veterans also suffer from Post-Traumatic Stress Disorder (PTSD).

Posttraumatic Stress Disorder (PTSD)

PTSD is defined as experiencing a traumatic event and not having the ability to recover from the traumatic event (Leano et al., 2019). PTSD has been documented to occur at higher rates among student veterans (Morissette et al., 2021). PTSD can negatively impact educational functioning; however, the effects of PTSD are less understood, given that PTSD has been observed to have high comorbidity with many other conditions that could potentially affect educational functioning (Morissette et al., 2021). These comorbidities may be injuries sustained in combat, polytraumas, or traumatic brain injury. Combat veterans experience significant rates of chronic pain that interfere with their daily functioning (92.7%), symptoms of PTSD (77.9%), symptoms of TBI (26.0%), and comorbidities as the polytrauma clinical triad (14.2%). Despite

the high prevalence of pain, PTSD, and TBI, few students accessed disability services (5.2%), counseling services (18.8%), or student health services (36.5%)" (Elnitsky et al., 2018, p. 58).

In a study conducted by Bartone, and Homish, (2020) on student veteran resilience the study results from those sampled determined that 10.6% of the participants screened positive for depression risk, based on the endorsement of at least 1 item, 5.7% of the participants reported an even higher risk for depression (endorsement of more than one depression items) (Bartone & Homish, 2020). When adding the groups together the total showed that 16.3% of the sample participants reported some degree of depression symptoms.

Bartone and Homish (2020) reviewed previous studies and determined that the results from their study were somewhat high when compared to a previous study (Hoge et al., 2006) that reported 6.1% depression symptoms in a large sample of 238,938 Operation Iraqi Freedom Army and Marine veterans. However, from the Hoge et al. 2006 study, 36% of that group reported no combat exposure at all, while only 15.4% of the Bartone and Homish (2020) sample had no combat exposure. Thus, the higher endorsement of depression symptoms in the Bartone and Homish (2020) group sample is likely due to the increased prevalence of combat exposure an increase of 42.77%. when comparing both study groups.

Avoidance Coping

Avoidance coping is another strategy that veterans that have been exposed to combat employ to try and deal with mental distress (Bartone & Homish, 2020). Many veterans turn to alcohol consumption as an avoidance coping mechanism and a direct link to lower levels of hardiness or toughness (Bartone et al., 2017). When individuals have a high level of hardiness, they tend to use less avoidance-focused coping strategies that in turn may lead to more beneficial health outcomes (Bartone & Homish, 2020; Bartone et al., 2017; Hewett et al., 2018; Kowalski

& Schermer, 2019; Thomassen, et al., 2018). Psychological toughness and psychological stubbornness can be a mediator between cognitive flexibility and self-regulation.

Military Culture and Cohesiveness

Military culture as defined by Burek (2018) is a culture in which values are spelled out and explicitly taught from the beginning such as sacrifice, honor, courage, duty, and service above self are which are common values shared by all service members; working as part of a team and being able to rely on those around them inspires a sense of pride, belonging, loyalty, and brotherhood known as *esprit de corps.*

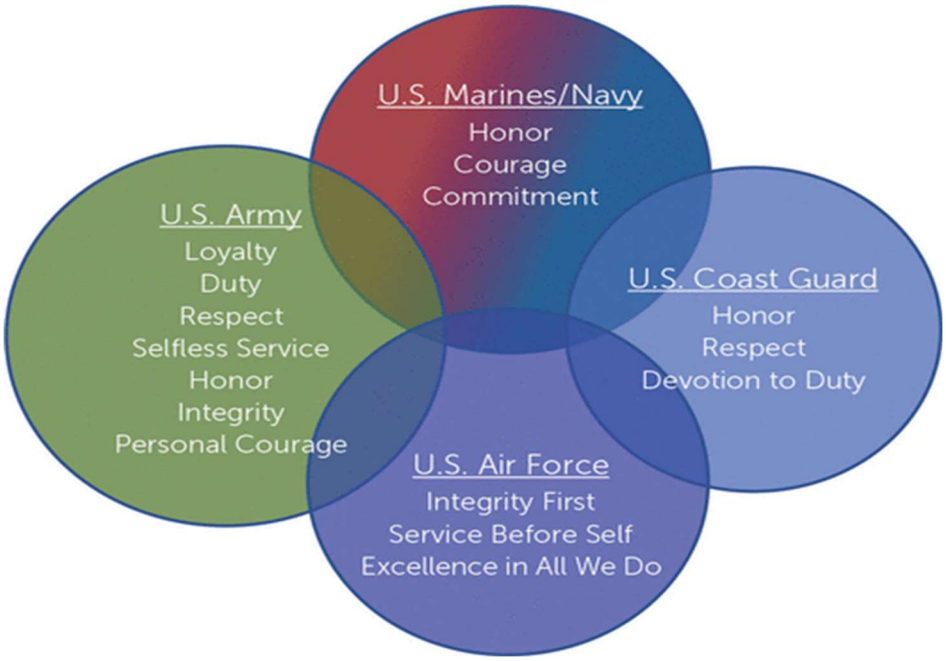

Figure 1. U.S. Core Military Values

Additionally, military service, particularly on the frontlines of combat, are often confronted with their mortality (Burek, 2018) maybe they thought of this as they signed their contract or perhaps when they are downrange with projectiles flying overhead. How they often cope is telling

morbid jokes that involve death this dark humor is ubiquitous in the military (Burek, 2018). For military veterans flippantly speaking about death is not preoccupation with morbidity, it is a way of coping with this overwhelming burden (Burek, 2018). These thoughts are often hidden from family and friends as well as from clinicians due to fear of judgment; this fear of judgment is what may prevent veterans from talking openly with civilians and from seeking professional help (Burek, 2018).

Self-Identifying to Receive Services

In a conducted by Hinton 2020, individuality can be a factor that makes causes a conundrum of what services to offer student veterans. The study's findings revealed that many student veterans are very much aware of the identity negotiations taking place as they transition from the service through college and into post-college employment (Hinton, 2020). This group of students graded themselves quantitatively, in other words, how do they grade their veteran identity and likeliness to divulge their veteran status while attending college or university.

The interview participants offered insight about aspects of their "veteraness" including age and gender, combat experience, and length of service that produce a more complicated and comprehensive snapshot of how veterans conceptualize their veteran identity (Hinton, 2020). Veterans here as defined refer to the myriad, actualized personal and sociocultural aspects of veteran identity as veterans experience them in their own lives (Hinton, 2020). Several identity themes were revealed during the Hinton (2020) study. First, two divisions among the military/veteran identity attachments emerged: those who positioned their military and/or veteran identities as a part of defining their identities and those who did not (Hinton, 2020). Additionally, the extent to which participants considered the military identity or student veteran identity as a

core aspect of their defined self may influence the circumstances under which they choose to disclose status as a veteran (Hinton, 2020).

The next theme that emerged from the Hinton (2020) study was the military self as core self. From these interviewees, they were very adamant that their military service was ingrained in their very core identification and would forever be a part of who they were. All took pride in their service affiliation, "identifying themselves as prior Air Force, Army, and Marine Corps service members" (Hinton, 2020).

> "Frank described his military identity with the telling response, "I'm just like one," and Nathan explained, "Once a Marine, always a Marine." Laura asserted the Air Force was "in [her] blood" (Hinton, 2020).

All four student veteran participants focused on their prior military service values as the strengths and contributions to their identities and how that played a role in their success as college students those characteristics that were cited were; focus, self-discipline, maturity, goal attainment, world experience, attention in class, and a refusal to fail (Hinton, 2020). This transferred into their connection to the student veteran identity; that is, a strong association with the former (military service) is often a strong association to the latter (student veteran) the only exception to that was Paul (Hinton, 2020).

Paul shared that:

"I'm a retiree and not just four [years] and out. I spent 18 plus years in the military, so I have a lot more maturity, but then again, that leaves me with a lot more inability to relate in the civilian world" (Hinton, 2020).

The other three interviewees recognized that as they move into the civilian world as prior military and student veterans, their identities were driven and shaped by their past military

experiences, gave them advantages as college students; but on the other hand, they can also be the cause of some academic and social consternation even as they progress toward degree completion (Hinton, 2020).

From Hinton's 2020 study other student veterans considered their military service as one part of the whole meaning that although they were prior military, they articulated very clearly how their military selves had not become a defining identity for their whole selves. For these individuals their identity complexity as externalized (i.e., not allowing their veteran status to color how others could perceive them) or internalized (i.e., not feeling distinctly military or veteran), in other words, they did not want to be limited by the term student veteran (Hinton, 2020).

Willingness to disclose their veterans is also different among the participants as well. Four of the participants with military core identities expressed being more likely to disclose their veteran or military service experience willingly and, oftentimes, to advocate for themselves or other veterans on campus, but the other participants with less attachment to the moniker of student veteran exposed the external pressures and the unavoidable nature of disclosing their veteran or military affiliation status (Hinton, 2020). For many of these students, it became a necessity to access their military educational benefits (Hinton, 2020).

Veteraness Complicating Veterans

Conversely, how do veteran or generalized conceptualizations about veteran identity in how student veterans conceptualize veteranness? Four factors emerged from the Hinton (2020) study that shows how a more generalized definition of student veteran can complicate and make the transition, situation, self, and support difficult for veterans that attend colleges and universities. Those four factors emerged as distinguishing features of veterans: combat

experience, length of service, age, and gender (Hinton, 2020). A marker of difference across student veteran groups is that of a veteran with combat experience (Hinton, 2020). “For Frank and Paul, both Post-9/11 combat veterans who saw direct enemy engagement, combat experience changed how they shared experiences and camaraderie among other veterans; unexpectedly, both the engagement aspects of combat and the global perspectives of a combat deployment marked these differences” (Hinton, 2020). Frank explained:

“I also believe there’s a distinct difference between your typical military veteran—one that’s never had to be deployed and had their whole career stay stateside versus one that has. I think there’s a huge gap between a veteran and a combat veteran…Being in that kind of a situation, especially for me, very radically changed my life experience and my view about things like being in Iraq and seeing where they were living in these very crude mud huts sometimes and seeing their most precious possession might be a rug that was their family’s or whatever to coming here and seeing people fight over who’s got the bigger TV or the materialism of American society” (Hinton, 2020).

Other students that have been in a combat theater but did not engage the enemy also have trouble with how to identify themselves; hence, combat experience and how combat itself is interpreted can shape a veterans’ understanding of and relationship with their own veteran identity (Hinton, 2020). Hinton echoes Burek (2018) that service type, length of service, gender, age, job, rank (enlisted, officer), and world view often dictate the individual veteranness. Hinton (2020), states how student veterans’ self-reported identity attachment might impact their higher education experiences as in their sense of belonging. Belonging in how student veterans felt included with or excluded from typical college students or the traditional college environment

(Hinton, 2020). How does transition, situation, self, and social support influence that belonging for student veterans?

Transition

The concept of intersecting identities is perhaps the most useful about student veterans (Jenner, 2017). Thus, for student veterans, leaving the military involves re-conceptualizing not only what they do, but also who they are and what they believe (Jones, 2017). It also depends on how (combat veterans and non-combat veterans) student veterans view the transition from the military: (1) the situation and their control over what is occurring, (2) self-reliance, (3) what type of social support is accessed and available and, (4) strategies they can employ to manage the transition.

As they transition into higher education institutions, combat veterans and non-combat veterans may feel a source of contention when working with peers who do not respect their professors, do not take their work seriously, or focus more on social lives than on education. Several participants from the Hinton (2020) separated themselves from their peers by noting the lack of maturity of their civilian peers. Student veterans who have a stronger college attachment reported fewer psychiatric symptoms and transition and adjustment were easier for this group.

Recent work examining the relationship of identity attachment of student veterans by Lostutter et al. (2020) concluded that veteran students with stronger connections to their college student identities reported fewer psychiatric symptoms, such as PTSD, depression, and anxiety that could have negative effects on adjustment (p. 37). When an individual is transitioning through the “moving in” process, she or he will need to “learn the ropes” and become familiar with rules, regulations, norms, and expectations of the new system (Goodman et al., 1997, p. 167). Which is an echo of the work of Schlossberg’s’ and Chickering’s’, 1995 work on ‘moving

in', 'moving through', and 'moving out' in Getting the Most out of College. What may not align with an institutional mission is the student veterans' own personal definition of what constitutes a successful career transition (Robertson, & Eschenauer, 2020). Positive factors that aid in transition are seen in four stages. Stage 1 (preparation), in this stage the student veteran is eager for change, i.e... the demonstration or in readiness, motivation, and positive planning experienced by student veterans in preparing for separation from the military (Mendez et al., 2018). Stage 2 (encounter), the theme of transferable skills was found; were the student veterans able to apply and relate the skills that contributed to their success in the military to the college environment (Mendez et al., 2018). Stage 3: (adjustment), revealed the themes of peer support and camaraderie and personal and academic development (Mendez et al., 2018). Stage 4: (stabilization), the themes of exposure to resources and intentions for involvement emerged (Mendez et al., 2018). Both academic and social involvement are correlated with college retention and persistence, as students who are not assimilated into the classroom and institutional cultures are more likely to struggle academically and drop out (Tinto, 2012).

Situation

Historically, situation refers to how individuals assess transition and sense of control over what is occurring (Evans et al., 2010). Issues of concern within this factor include whether the change is seen as permanent or temporary if the transition is perceived as positive or negative and whether there are other stressors present which exacerbate transitional challenges (Goodman et al., 2006; Schlossberg et al., 1995, 2012). Perception of the situation is also a factor, and any external situations can cause perceptual changes.

Self

Self refers to factors about how internal resources and personal characteristics influence coping. Psychological resources refer to personality characteristics and internal states which can influence how individuals cope with transitions. Schlossberg and colleagues highlighted the importance of explanatory style, optimism, self-efficacy, resilience, and values and commitments in this process, noting that greater perceptions of control and positive assessments of situations are more likely to result in positive outcomes (Goodman et al., 2006; Schlossberg et al., 1995, 2012).

If the student veteran perceives that they are more mature than their peers, the age and maturity differences can create social distance and a lack of engagement. Student veterans may feel that they do not fit in due to coming from a regimented, highly structured environment that requires self-discipline to an environment where independent thought, laissez-faire student dress in class (showing up in pj's and a messy bun for class), and scouring social media in class seems to be the standard that establishes differences between student veterans and traditional students thus creating cultural dissonance for student veterans (Caton, 2019).

Social Support

Support is largely social and addresses how caring, affirmation, and positive feedback can facilitate transitions (Evans et al., 2010; Goodman et al., 2006; Schlossberg et al., 1995, 2012). The need for various forms of support is consistently highlighted in literature and research on student veterans (Vacchi et al., 2017). For community integration and social support peer support groups, also known as "self-help groups," provide a unique tool for helping veterans working through the military-to-civilian transition (Drebing et al., 2018). Growing research evidence suggests that these groups are associated with measurable improvements in social support, clinical symptoms, self-efficacy, and coping (Drebing et al., 2018). In addition to

institutional structures, supportive campus peers can promote transitions (Osborne, 2014; Rumann & Hamrick, 2009). According to Anderson and Goodman (2014), a primary factor when working with student veterans in transition is support as they return, move, or separate from the support shared in their small unit bonds. With this loss of support, many experience feelings of isolation after discharge. The Student Veterans of America have made a giant leap to bring peer support to the colleges and universities across America (Drebing et al., 2018). Support can be provided by assisting student veterans in sharing information, referrals, and practical help to navigate the situation. Connecting student veterans to supportive services are important across the areas of physical and mental health, career readiness, and interpersonal relationships (Drebing et al., 2018).

Strategies

Strategies speak to abilities to manage transitions through one's behaviors (Evans et al., 2010): "Strategies are addressed in terms of modifying the situation, changing the meaning of problems being faced, and managing stress associated with the transition" (Anderson & Goodman, 2014, p. 44). There are three categories of coping responses: controlling the meaning of the problem; modifying the situation and managing stress after the transition. Four different coping modes can be engaged by individuals to these responses: direct action, information seeking, inhibition of action, and intrapsychic behavior (Evans et al., 2010; Goodman et al., 2006; Schlossberg et al., 2012).

The assistance institutions offer can help student veterans transition to campus which can facilitate their abilities to modify the situation, control the meaning of the problem, and manage stress. Knowing who to contact on campus, where to go to receive support can mean the difference between retention and attrition for student veterans. The American Council on

Education (2018b) recommended creating specific points of contact for student veterans to help them navigate bureaucracies and assist them in navigating obstacles that might otherwise prevent degree completion. Appointing an institutional contact to help with the reintegration process has also been identified as particularly important (Wilson, et al., 2016).

Postsecondary institutions could be targeted for programs that are effective in retaining student veterans. Counselors could also be available to offer academic guidance and advise student veterans in planning a suitable program of study. Postsecondary institutions should also find ways of promoting student veterans' social integration.

In a secondary quantitative analysis study (Cate et al., 2017), disaggregated data was based on a branch of military service. The findings from the study were that the Army had the largest representation with (42.8%), followed by the Navy (21.6%), Marines (17.2%), Air Force (16.8%), and Coast Guard (1.57%). A vast majority of the subset (80.5%) served on active duty while the remaining (19.4%) served in the Reserves or National Guard (Cate et al., 2017). Compared with the United States total military force (Military One Source, 2014), the National Veteran Education Success Tracker (NVEST) subset maintains a greater proportion of active-duty service members compared with the armed forces. This is not surprising due to the Post-9/11 GI Bill military active service eligibility requirements. Of the military students' subset, 20% were female which is a greater percentage than the overall percentage of women that serve in the military (16.5%) (Cate et al., 2017).

According to the Cate et al. (2017) study, 31.9% of student veterans enrolled in college before the age of 19 with an increase in enrollment between the ages of 22 and 29. After the age of 29, there is a sharp decline in enrollment. Differences in institution type could be experienced in the Cate et al. (2017) study with older student veterans attending four-year institutions when

compared to two-year or for-profit institutions. Of the 822,327 student veterans' records that were part of the Cate et al., (2017) study, the overall success rate was 71.6% including post-secondary completion and student veterans who were enrolled in classes in the term preceding the data match: January 1, 2015, to September 1, 2015 (Cate et al., 2017). Of the 822,327 records in the NVEST subset with enrollment records, 440,441 post-secondary completion records were found for a postsecondary completion rate of 53.6% and the attrition rate was 28.4 % (Cate et al., 2017).

When disaggregated by institution type, 58.7% were attending public schools, nearly two-thirds (65.1%) while (34.9%) were attending two-year schools (Cate et al., 2017). When disaggregated by degree type; the most frequent majors in which student veterans have earned degrees were business, management, marketing, and related support services (20.1%), science technology engineering math (STEM) and STEM-related majors (10.7%), liberal arts and sciences, general studies and humanities ranked third (9.0%), and health professions and related programs was fourth (7.7%) (Cate et al., 2017). Other compelling data from the Cate et al. (2017) study was an explanation of the rationale for student veterans to withdraw from a term and why it typically takes longer for a military student to finish a college degree. If they are on active duty and are called to deploy, they may have to prematurely withdraw from classes to serve the country before themselves. Student veterans transition in and out of the military culture and transition in and out of the campus culture this cycle prolongs degree attainment for the student veterans. This can be frustrating and cause contention for student veterans when they feel no one understands their frustration.

It is precisely these differences in pre-college input, social role, approach to identity formation, and overall life course stage that distinguish student veterans from traditional

students, causing them to need diverse types of support and rendering research with traditional college students less applicable (Jenner, 2017). According to the National Center for Veterans Analysis and Statistics (NCVAS) (2019), post- 9/11, the veteran population has experienced the most substantive growth in diverse minorities groups. Statistical quantitative data were collected and compiled from the United States Census Bureau Current Population Surveys. All comparative statements for the data analysis had been subjected to statistical testing and are significant at the 90% confidence level. Being on active duty in the military and a military student can mean multiple transitions, deployments, and Permanent Change of Duty Stations (PCS), which can result in disruptions of normal attendance.

Military-Friendly and Student Veteran Services

Many institutes of higher education strive to be military-friendly and providing student veteran services are important subthemes to discuss in the literature review. The dependent variables in this study are student stress, belonging, and social support; furthermore, military-friendly programs are of quantitative importance based on student veteran input. Student veterans are the individuals who either receive these services as intended or the input could imply improvements are needed. Colleges and universities receive funding from the VA for student veterans who attend their campuses.

The better social support colleges provide, the more likely they are to enroll those students. In recent years of recession and funding cuts, the more sustainable an institution can be the better. There is financial motivation to be military-friendly. In post-secondary education in the United States, there is an improvement initiative to be more competitive, sustainable, and provide an emphasis on student outcomes in proving an institution’s value. Significant changes in higher education and military service and educational benefits for student veterans suggest

that harkening back to past practices may not be sufficient or appropriate to facilitate the enrollment and success of the modern military student (Sikes et al., 2020). Colleges and universities need to proactively anticipate and reactively accommodate student veterans and consider some of the educational and administrative challenges to successfully enroll and graduate these unique, skilled student veterans (Sikes et al., 2020). Having an advocate that has a basic understanding of both military culture and someone with firsthand knowledge of the military that can be used interchangeably can be beneficial to student veterans (Sikes et al., 2020).

Employment and the Economy

Economic factors also influence the non-profit sector of higher education. Because for-profit and community colleges have dominated the student veteran market historically, administrators at traditional colleges and universities must make concerted efforts to attract and retain student veterans to compete with for-profit institutions that have well-established recruiting and marketing strategies that truly are a commodification (Plante, 2016). The recent economic recession requires institutions to develop academic programs that appeal to student veterans by demonstrating their effectiveness in leading to gainful employment. More than 2.6 million service members have deployed to Iraq and Afghanistan since 2001 (Walker et al., 2017). As more service members encounter an uncertain job market due to the economic recession, many may choose to enter or return to school for increased marketability.

The same market forces that are promoting education are also affecting veterans such as the globalization of education. Institutions that are best prepared for the influx will have a remarkable edge in retaining and recruiting student veterans. The implications of the Post-9/11 G.I. Bill have created the demand for higher education administrators to evaluate not only how

military-friendly their institutions are currently, but what they can do to increase their marketability and perception as a military-friendly institution among potential student veterans.

Student Veterans' Services and Not Self-Identifying

In a study conducted by Seritan and Paterniti (2018), it was noted that some student veterans may not feel comfortable self-identifying and that future studies could focus on exploring specific views of student veterans (especially those with combat experience) and identifying acceptable ways for them to be able to identify themselves without feeling called out or stigmatized and intruded upon for doing so (Seritan & Paterniti, 2018). Student veterans' services and not self-identifying were chosen as a subtheme in the review of literature due to the relevance and challenges of providing social support to student veterans. The research questions posed in this study ask about if there is a difference in perceptions of veteran adjustment to college as measured by the Veteran Adjustment to College Sub-Scales between combat veterans and non-combat veterans? If practices or programs are going to be offered to student veterans, those programs and services should be based on what student veterans perceived as social support and programs that they need.

Self-Advocacy Via NSSV

Student veterans may also suffer from several cognitive injuries from serving in Operations Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) these cognitive injuries are Post Traumatic Stress Disorder (PTSD) and Traumatic Brain Injury (TBI) (Medley et al., 2017). In a study conducted by Kinney et al., 2020, student veterans were asked to disclose any injuries and health conditions that they were experiencing. The health conditions were classified into the following discrete categories: PTSD; physical/orthopedic injury; brain injury; sensory impairment (e.g., visual deficits); anxiety; depression; cognitive impairment (e.g., memory

deficits); developmental condition (e.g., attention deficit disorder); other psychological condition (e.g., bipolar disorder); other neurological condition (e.g., spinal cord injury); other physical condition (e.g., cancer); and sleep disturbance. These student veterans participated in a program called New Start for Student Veteran (NSSV) services (Kinney et al., 2020). NSSV is a supported education program at Colorado State University (CSU) for student veterans with disabilities at Colorado State University (CSU). The program is a person-centered supported education program for student veterans with service-related disabilities attending CSU (Kinney et al., 2020). The individual supports are provided by three trained student Veteran coordinators in one-on-one meetings throughout the academic year. The services that are provided are broadly classified into five categories: (1) social support, (2) academic advising and study skills, (3) connecting with campus and community resources, (4) health and wellness, and (5) community integration and participation (Kinney et al., 2020). The common goal of the NSSV program is to enhance student veterans' self-advocacy skills (Kinney et al., 2020). The NSSV program is grounded in the belief that effective self-advocacy is fundamental to all aspects of one's life including interpersonal relationships, academic achievement, career success, and overall health and wellbeing (Kinney et al., 2020).

Mindfulness & Motivation

According to Kearney et al. (2016), Gulf-War veterans complain of Gulf-War illness, and they may benefit from mindfulness-based stress reduction and that outcomes may be positive to reduce cognitive fatigue. In a subsequent study Reyes et al., 2020. In the qualitative study Reyes et al., 2020 explored student veterans' experience with mindfulness- and acceptance-based smartphone app intervention. The total participants were 23 student veterans that took part in a 4-week intervention that were then interviewed. Three main themes emerged from the thematic

analysis of the interview transcripts: (1) generating momentum of app use; (2) optimizing the functions and benefits of the app; and (3) resolving to deepen the practice of mindfulness and acceptance (Reyes et al., 2020).

In a qualitative study utilizing three focus groups, Hunter-Johnson (2018) found that student veterans' motivation to pursue higher education fit into four motivators: (a) self-improvement, (b) career change, (c) obtain a degree/experience college, and (d) financial gain. All those areas have dynamic differences when compared to other non-traditional students.

Student veterans perceive higher education as an opportunity to prepare themselves to know how to socialize and/or interact with civilians in the workplace; and enrollment is a needed rehearsal for the "civilian world" or "civilian workforce" (Hunter-Johnson, 2018). Other issues that student veterans deal with are if they have been medically discharged from the military and there is a lag of disability rating and payment benefits. The lack of benefits and pay can be disruptive and stressful for student veterans. There have not been sufficient studies that have addressed the interplay of veteran combat experiences, mental health, and experiences in educational settings (Medley et al., 2017).

Many student veterans are seeking to enhance employment prospects and often feel that they cannot provide for their families while enrolled in college (Medley et al., 2017). These students want reassurance that the degree will support their educational goals. Schlossberg, Goodman, and their colleagues (e.g., Goodman et al., 2006; Schlossberg et al., 1995, 2012), suggested that multiple forces influence an individual's ability to manage the transition. In a systematic review of literature, Jenner (2017) sought to understand the nature of student veterans and their pursuit of higher education and found that while traditional college student's pursuit of higher education is typically voluntary, student veterans' transitions from military service to

higher education are often more complicated, in many cases being necessitated by injury or circumstance. In other words, due to injury many student veterans are being forced out of the military prematurely and need the education to gain meaningful employment. While there is still a substantial proportion of student veterans reporting serving in Operation: Iraqi Freedom and Operation Enduring Freedom, a small but important group of student veterans report deploying for more recent military operations such as Operation: New Dawn and Operation: Inherent Resolve. (Wenger et al., 2018). This means we may see these student veterans in our higher education institutions because of being discharged.

To discover who they are, student veterans may not self-identify and although they look fine on the outside many of their disabilities may be invisible. This is not all student veterans and nor is the intent to show student veterans in a negative light. When compared to more traditional students, student veterans have had different life experiences and circumstances. A student veterans' previous military experience when combined with the college experience can give rise to challenges during transition and retention; and suggests the need to understand better, how student veterans perceive their transition to and experience in higher education (Robertson, & Eschenauer, 2020). Student veterans need to feel a sense of belonging and social support. They need to know they matter and are not marginal in the scope of their academic career.

Giampaolo, and Graham, 2020 investigated whether there was an increased sense of mattering for student veterans who attended a student orientation that contained veteran-specific content. Giampaolo, and Graham 2020, utilized a quasi-experimental design as a lens for interpreting the data produced, they considered the Unified Measure of University Mattering Scale (UMUM) scores for Group A as a quasi-control group, students who did not experience either type of tested treatment. By contrast, Groups B and C experienced two different

treatments. Giampaolo and Graham (2020) could interpret the difference in UMUM scores between the treatment groups and the control group, as potentially indicating treatment effects. Student veterans who attended an orientation session with veteran-specific content (Group C) reported a statistically significant increase in their sense of mattering to their school over student veterans who did not attend any orientation session (Group A), allowing them to assert a positive relationship between a student veteran-specific orientation experience with an increased sense of mattering to their school for the student veterans who were surveyed (Giampaolo, & Graham, 2020).

The same cannot be asserted for the student veterans who attended a regular orientation session (Group B) because they did not score significantly higher than student veterans who did not attend any orientation session at all (Group A). Of the two types of orientation sessions experienced by student veterans in this study, only an orientation session that included break-out or add-on veteran-specific content correlated positively to increased scores on the UMUM (Giampaolo & Graham, 2020). The research results supported their hypothesis statement: student veterans who attended a student orientation program with veteran-specific content will report a higher sense of mattering to their university than those who either did not attend student orientation or attended a regular student orientation without veteran-specific content (Giampaolo & Graham, 2020). This topic is relevant to review in the literature for this dissertation because student veterans' perceived belonging and social support is the focus of the research questions posed in this study.

Service Areas for Student Veterans

What follows is a compilation of programs and services that many student veterans would agree are needed to ensure their success and may aid in the perception of social support

and belonging for student veterans that attend community colleges. The services and programs are as follows: 1) accreditation practices; 2) student service office; 3) understanding faculty and staff; admission and transfer credit practices; 4) green zone training; 5) student veteran liaison practices; 6) admission, transfer credit and credits earned from military transcripts; 7) school certifying official; 8) economic assistance practices; 9) student veteran organizations, and 10) writing center tutor corps family support service.

Accreditation Practices

Accreditation practices refer to acceptable education according to accreditation agencies. While every student veteran would like college credit for their life and military experience, strict adherence to state, federal, and accreditation regulations are important as academic credit cannot be awarded without appropriate justification and compliance. (Sikes et al., 2020).

Student Service Office

A student services departments' mission within the university is to support an educational environment that cultivates professional and personal growth through coordination of activities, advisement, dissemination of information, and institutional compliance for its students (Sikes et al., 2020). The student services office should be committed to providing to assist in the creation of an environment that fosters and encourages professional and personal growth through student leadership through institutional oversight in the equity of services across all campuses (Sikes et al., 2020). The student services office should also provide opportunities for veteran participation and leadership to encourage teamwork with fellow students (Sikes et al., 2020).

University Faculty/Staff Military Awareness

Student veterans often feel misunderstood by younger peers and faculty that display a limited understanding of military culture and veteran experiences (Morris et al., 2019). For a

small portion of student veterans, additional stressors may include traumatic events, chronic daily stressors related to physical injuries, multiple and/or quick deployments, and, mental health concerns, or personal relationship issues with spouses, children, or peers (Elliott, 2015; Morris et al., 2019; Niv & Bennett, 2017). Interventions that have been identified to reduce the stressors listed are indicative of the various supports needed to assist student veterans in their transition to higher education including granting credit for military courses as appropriate, and training and informing faculty how important it is to understand the student veteran population (Sikes et al., 2020).

Green Zone Training

Green Zone Training involves training faculty and staff in what it entailed to be a student veteran i.e... the military culture, and what they needed (Sikes et al., 2020). To learn about the specific needs' student veterans encounter, employing retired military who are faculty is a great start (Sikes et al., 2020). The faculty who were retired military, shared their experiences with the faculty while in school and what needs and services, they wished they would have received; the second approach was to investigate Green Zone Training (GZT) which is a military educational program designed for faculty and staff that advocated for veteran attendance (Sikes et al., 2020)

GZT was created for individual tailoring to a specific university and/or community college student population (Sikes et al., 2020). "Besides introducing military culture, the GZT encompassed an overview of the veteran and military student population on campus and potential distinctive stressors including negotiation of military education benefits, transference of military and prior education credits, and unique challenges meeting educational requirements" (Sikes et al., 2020). GZT consists of six online self-paced learning modules that consisted of a

military overview, cultural competence, mental health issues, academic advising, disability services, and military and veterans' benefits (Sikes et al., 2020).

Student Veteran Liaison

Providing an individual point of contact that has military experience i.e., someone who understands the military culture, the educational system as well as the unique requirements of education programs is also essential for student success and should not be underestimated (American Council of Education, 2018a). The benefits for student veterans to be able to speak directly with someone with firsthand knowledge about how the military works instill a sense of camaraderie while the student veteran liaison can also be realistic about the expectations for the educational demands, discussing the "how" and "why" of the academic requirements (Sikes et al., 2020). This can help student veteran liaisons initiate an environment of trust and understanding while helping student veteran's crosswalk the military and/or education terminology to successfully meet the program requirements (Sikes et al., 2020)

Admission, Transfer Credit, and Credits Earned from Military Transcripts

Higher education administrators acknowledge that there are challenges to awarding transfer credit for previous military experience and how the credits should be categorized. Across the United States, there are different policies or no policies in place to award credit to student veterans based on past education and military training. Several states in the Midwest admit that they do not have formal legislation that is related to reviewing student veterans' education and training to award credit and are actively engaged in processes that do just that. (Johnson, & Appel, 2020). Several other states have colleges and universities that work directly with federal agencies allowing military employees, and civilians, to transfer course credits to a bachelor's degree (Johnson, & Appel, 2020). An online survey of student veterans' perceptions found that

out of those that attempted to transfer credit only 47% were satisfied with the results; that could be due to unrealistic expectations. Student veterans have indicated that institutions of higher education should have established and enforced student veterans' credit transfer policies, accept credits from military transcripts, participate as a member of SOC, and ensure trained personnel conduct timely and accurate evaluations of military educational records (Wilson, et al., 2016). Vacchi (2018) emphasized the critical importance of high-quality faculty advisors for student veterans; advisers need to understand the nuances of transfer credit and have a firm understanding of student veterans' individual needs to provide other things found critical to veterans in various research studies.

School Certifying Official

Student veterans transitioning into higher education need help to navigate the transition. Operating a dedicated school certifying official (SCO) is especially helpful in aiding the military student in utilizing their joint military service transcript for transfer and applied college credit as well as certificates that can be earned in conjunction with degree programs based on military education and job descriptions. Additionally, school certifying officials will now be required to complete training on their GI Bill administrative responsibilities and are to have access to information to help them advise GI Bill participants (Dortch, 2018). The SCO can verify each military student's eligibility for Veteran Affairs (VA) educational benefits and ensure that courses that the military student enrolls in represent progression towards a degree

SCOs should be in regular contact with the OVMS but those interactions may be limited to certifying benefits and evaluation of military discharge certificates (DD214), completing certification requests. Finding an SCO who is familiar with military occupational specialties and how that equates to credits and plugging the military student in with a knowledgeable advisor

and into a degree program that is beneficial to the military student will help ease the transition and integration process into the college campus environment (Osborne, et al., 2015). The SCO works for the institution, the VA, and the student, the SCO will examine exactly where each class counts for the military student, the school, and the VA (Spencer, 2016). SCOs can be a facilitator for the military student and the institution and can be instrumental in a smooth transition for many student veterans. New initiatives were enacted in 2018, to ensure proper training of SCOs (Dortch, 2018). It was determined that before and following the enactment of the Colmery Act, each educational institution and training establishment must designate a school certifying official (SCO) to fulfill the requisite responsibilities for administering GI Bill benefits.

> Both the GAO and VA Office of Inspector General indicated that required SCO training would improve the timeliness and accuracy of GI Bill administration and reduce overpayments.32 Section 305 of the Colmery Act requires the VA, in consultation with the SAAs, to establish training requirements for SCOs at educational institutions with at least 20 GI Bill and VR&E participants. (Dortch, 2018)

Economic Assistance Practice

These key benefits for student veterans include but are not limited to the GI Bill, depending on income PELL grants and other grants and scholarships that are geared towards student veterans or their families. The GI Bill as was previously mentioned has changed over the years and has been driven by many factors and changes in our society just as it has changed society. Monthly stipends are provided by Chapters 35, 1606, and 1607, which are like Chapter 30 in structure (Dortch, 2017). The Montgomery GI Bill®, established in 1984 was named for Mississippi Representative G. V. “Sonny” Montgomery (Dortch, 2017). The Montgomery GI Bill established separate education benefits for the active forces and reservists (Dortch, 2017).

Congress hoped that the education benefit offerings would incentivize college-age individuals to enlist in the military.

The 2008 Veterans Educational Assistance Act (Post-9/11 GI Bill) fueled the largest expansion of education benefits since the 1984 Montgomery GI Bill (Protopsaltis & Masiuk, 2017). It provides up to $22,805 per academic year in tuition and fees along with a monthly housing allowance and a book and fees stipend to student veterans and is transferable to dependents if the individual served on active duty for at least ten years (Protopsaltis, & Masiuk, 2017). “In FY2018, the program is estimated to benefit almost 800,000 individuals and expend over $12 billion” (Dortch, 2017, p. 1).

Spending for the Post-9/11 GI Bill has represented approximately 80% or more of total GI Bill participation and spending in each year since its inception and, although the VA still provides benefits under several older GI Bills, participation has increased exponentially since FY2013. This benefit varies in amounts based on what type of program that the individual is enrolled in. The housing stipend amounts depend on full-time face-to-face campus enrollment vs. online enrollment. The housing stipend also depends on the location of the military student’s address as far as the amount that is paid out. Student veterans were also able to take advantage of a $1,000 stipend for books for each calendar year of enrollment (U.S. Department of Veteran Affairs, 2018).

Student Veteran Organizations

Jenner (2019) contends that student veteran organizations (SVO) are not only an important starting point for student veterans who are new to the institution, but SVOs may also provide student veterans with their most meaningful out-of-class connection on campus, contributing to improved persistence and degree attainment. SVOs can produce many positive

experiences and can positively affect education outcomes for students transitioning to higher education (Jenner, 2019). Jenner (2019) also noted that colleges and universities should employ formal and informal programs and policies that strengthen veteran peer communities as these programs have the power to pay substantial dividends in terms of veteran educational achievement.

Writing Center Tutor Corps

Wilson and Wright (2017) started a veteran-tutoring-veterans program that was named the Writing Center Tutor Corps (WCTC). Wilson and Wright (2017) underscored the disconnect between the purpose of a writing center for student veterans touting that "aid in transition" of student veterans is like asking them to leave the identity of their military service behind them and for many their service is a sense of pride and they co-exist successfully, student and military member. Being able to incorporate past experiences into their current experience can help aid transition for student veterans.

Former Student Veteran Serving as Researchers to Better the Student Veteran Experience

Based on recommendations from student veterans from his Veteran Ally (2014) study implemented a similar transition course for student veterans (Osborne, 2016). Osborne's (2016) mixed-methods study included 21 military student participants who attended the transition course for eight weeks. The median age of the participants of the Osborne (2016) study was 24 years old. Participants answered surveys and questionnaires regarding the effectiveness of the transition course and the findings according to a post-course evaluation.

All 21 participants "strongly agreed" that the transition course was effective in supporting their transition to the university. More than 50% of the participants recommended that the course be extended to a full semester and several requested that it be mandatory for new student

veterans (Osborne, 2016). Osborne et al. (2015) co-authored a book titled “Life during college: The veteran’s guide to success” which is being implemented for military student academic success courses (ACA) courses. Osborne (2016) noted that the interesting portion regarded the comments from one of the students stating that traditional orientation classes were brutal because they were overrun with ‘kids straight out of their parents’ home who had no idea what it was like to deploy and let alone lead a platoon. In response to that statement, Osborne (2016) started ACA classes that were military students only.

Fostering a welcoming environment for student veterans is necessary. According to Wilson et al. (2016), there are disparities in what institutions consider welcoming for student veterans and these different levels of programs and services can be problematic for student veterans, indicating that a standardized process needs to occur. Another strategy institutions of higher education are implementing is student veteran organizations that student veterans can join when they arrive on campus. First-year transition courses can aim to fulfill several goals: (1) welcome new student veterans and to educate them of the assistive resources on campus and within the community; (2) support their academic readiness through skill development (e.g., note-taking, reading comprehension, effective writing strategies); (3) create a safe and communal space where they could reflect on their transition, beliefs, assumptions, and discuss their new mission as students with other military student peers; and (4) integrate them into the university by way of campus activities and student organizations (Osborne, 2016)..

Summary

Institutions utilize and provide a wide variety of services and structures to student veterans. What one institution offers for student veterans in the way of programs may not be what another campus offers for its student veterans. As colleges and universities aim to address

the needs of student veterans, educational and administrative challenges must be addressed with forethought to accommodate the specific needs of student veterans (Sikes et al., 2020).

This suggests that there may be a possible disparity of perceptions regarding (combat veteran and non-combat veteran) student veterans, their transition into the college setting, stressors that inhibit a smooth transition, and the services that are provided for them that may or may not give them of sense of belonging or social support. Gaining and an understanding of student veteran perceptions of services can ensure that institutions and faculty do not succumb to the "more is better" mentality for support services and instead recognize that supporting successful transitions for student veterans should be centered around the student veterans' perspectives (Morris et al., 2019). The review of literature covered a historical influx of student veterans, student veteran population (combat veterans, non-combat veteran), transition as defined by the 4 S's, belonging, social support (as explained by institutes of higher education being military-friendly and military student services). Several research studies examined how Schlossberg infused Lazarus and Folkman's stress and coping theory and studies on student veterans with a discussion of using social support in the form of family support as a mechanism of coping.

It was found that military-friendly services offered by these higher education institutions may be based on external criteria or internal motivation (Stewart, 2016) and that there was not a standard service member-friendly educational profile (Wilson et al., 2016). Chapter three included an introduction, a statement of the problem, a restatement of the research questions, a detailed description of the methodology and design that was chosen for this study based on the hypothesis and established research questions. Next, the population and sample selection choice and the rationale behind this population were discussed. The instrumentation and sources of data

and choices and steps in data collection, and data analysis procedures based on the established gap in literature were outlined and discussed in detail.

CHAPTER THREE: METHODS

Overview

This study investigated the differences between (combat veteran and veteran) student veterans' adjustment to college based on the factors of belonging, social support, and student stress as measured by the Veteran Adjustment to College Scale. Chapter three discussed the methodology and design of the research study, including the research questions, design structure, procedures, participants, and instrumentation. The chapter concluded with how the data analysis was analyzed and the assumptions that needed to be met for the analysis.

Design

This study used a quantitative, non-experimental, causal-comparative, ex post facto design utilizing archival data. A quantitative study was appropriate due to the analysis of numerical instruments examined via statistical analysis to interpret the data using prior predictions and research studies (Creswell, 2015). Furthermore, a causal-comparative design is used when data are gathered from groups and is appropriate as it alludes to cause-and-effect relationships between groups on the dependent variable, and because the groups are naturally occurring meaning no manipulation has occurred (Gall et al., 2007). A casual-comparative design can be employed to examine educational phenomena through the study of cause-and-effect relationships (Gall et al., 2007). A quantitative causal-comparative study was employed to explore contributing factors that contributed to college success among student veteran transfers at a four-year university (Sansone & Tucker Segura, 2020). Additionally, Bauer (2019) examined the success and comfort levels of student veterans who were diagnosed with post-traumatic stress disorder (PTSD) by utilizing a quantitative causal-comparative design. A causal-comparative study design was appropriate for this study because it was seeking to determine if

there was a difference between groups (combat veterans vs. non-combat veterans) and to interpret data using prior predictions and research studies (the results of the Veteran Adjustment to College Scale). Although a limitation of a causal-comparative non-experimental design, is that the findings of the research may have offer an incomplete message of causality between the IV and DV; due to there not being a need to control for extraneous variable(s) (Kucer, 2018).

For this study, the researcher utilized archival data and analyzed that data through statistics and was non-experimental in design meaning that no manipulation of the variables occurred. Ex post facto as applied or titled to studies means that the data was gathered retrospectively (Simon & Goes, 2013). For this study, the independent variable(s) were combat veterans and non-combat veterans. The dependent variable(s) was student veterans' perceptions of adjustment to college as measured by the Veteran Adjustment to College Scale (VAC). This study was a retrospective causal-comparative study because the effects of the independent variables that were used in this study were data that had already been collected. Furthermore, the groups remained static because the data was archival and there was no participant movement between groups during this study. Adjustment defined refers to a student's ability to adapt to the challenges faced in an academic setting (Credé & Niehorster, 2012). Military status refers to members as National Guard/ Reserves, active duty, combat veteran, veteran (Young, 2017).

The independent variable identified in the study was the military status of student veterans (i.e., combat veterans or non-combat veterans). Combat veteran defined as anyone who has served in combat (Castro et al., 2015) Veteran defined according to Title 38 of the Code of Federal Regulations defines a veteran as "a person who served in the active military, naval, or air service and who was discharged or released under conditions other than dishonorable, if they were not dishonorably discharged (VA.org., 2021). For this study, veterans were termed, non-

combat veterans. The dependent variable(s) in this study was a veteran adjustment to college as measured by the VAC factors (belonging, social support, and student stress). Belonging was defined as the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment. (Hagerty et al., 1992). Social support was defined as resources provided by other persons (Cohen & Syme, 1985). Student stress was defined as the relationship between the student and the environment that was appraised by the person as relevant to his or her wellbeing and in which the person's resources are taxed or exceeded" (Folkman & Lazarus, 1985). The gap in the literature showed a need for additional research in factors that affect veteran adjustment to college. For this study, the researcher analyzed the results from the Young (2017) study.

Research Question

RQ1: Is there a difference in perceptions of veteran adjustment to college as measured by the Veteran Adjustment to College between combat veterans and non-combat veterans?

Hypothesis

$H_0$1: There will be no difference in perceptions between adjustment to college as measured by the Veteran Adjustment to College between combat veterans and non-combat veterans.

Participants and Setting

Population

The participants for this study were drawn from three public universities located in three geographical areas in the United States. To ensure an adequate sample size for (combat veterans and non-combat veterans) student veterans participant solicitation was communicated to universities in Connecticut, Illinois, and Texas in the United States.

Table 1

Population Demographics

College Attended By State	*N*	%
Connecticut	23	11.5%
Texas	83	41.5%
Illinois	94	47.0%
Gender	*N*	*%*
Female	42	21.0%
Male	156	78.0%
Non-Disclosed	2	1.0%
Race	*N*	*%*
Asian	3	1.5%
Black	7	3.5%
Latino	33	16.5%
Multi-Racial	8	4.0%
Native American	2	1.0%
White	150	75.0%

Household Status	*N*	*%*
Single	85	42.5%
Married/DPartner	85	42.5%
Divorced	22	11.0%
Separated	6	3.0%
Non-Disclosed	1	1.0%
Year in School	*N*	*%*
Freshman	13	6.5%
Sophomore	17	8.5%
Junior	53	26.5%
Senior	78	39.0%
Graduate	37	18.5%
Non-Disclosed	2	1.0%

Participants

For this study, the participants were combat veterans $n = 127$, and non-combat veterans $n = 238$. Having 200 participants exceeded the minimum requirement of 126 with the assumption of medium effect size with a statistical power of .7 at the .05 alpha level (Gall et al., 2007). The participants were further filtered to remove respondents that answered that they were both combat veterans and non-combat veterans. A convenience sample was used in this study (Gall et al., 2007). The sample for this archival study consisted of (combat and non-combat) student veterans from the Young (2017) study. The cases in this study were readily available, rather than

cases that were randomly selected from a specific population (Gall et al., 2007; Warner, 2021).

Within both the combat veteran and non-combat veteran samples, the predominant characteristics were white (75%.), male (78%), seniors (39%,), married (42.5%), and attended SIU (47.0%). Two respondents declined to identify their gender, year in school, and household status. However, because population demographic information was not a variable or influential factor in the overarching hypotheses, the participants were included in the study. The overwhelming percentage of participants being white, and male indicates that the overall results of this research will be more representative of white and male perspectives than of minority or female perspectives. The results of this research will have increased generalizability with similar populations and decreased generalizability in differing populations. These demographics are, however, closely aligned to the demographic averages which state that in 2018, 77% of military members were white and 82% were male (Council of Foreign Relations, 2022).

Table *2*

Student Veteran Sample Demographics

Student Veteran Military Status	*N*	*%*
National Guard	10	5.0%
Active Duty	1	0.5%
Combat Veteran	110	55.0%
Non-Combat Veteran	90	45.0%
Months Deployed	*Total Length N= Months(m)*	*Ave.*
0.00 m - 72.00 m	2198	10.0 *m / student veteran*

Participants from the combat veterans and non-combat veterans' group were combined into one group of 365 total participants. A random sampling of participants from this population will occur to include 200 participants. A random sample is a segment of cases from a population that is selected that each case (participant) has an equal chance of being included in the sample; and this should increase the generalizability of the study (Warner, 2021).

Participants from the combat veteran n = 127 and veteran group n = 238 were the two groups (clusters) of participants. A cluster random sample is a two-step process in which the entire population is divided into clusters or groups (Acharya, et al., 2013), for this research combat veterans and non-combat veterans. All 365 participants were then combined into one spreadsheet. Next, the participants that had checked both a combat veteran and non-combat veteran were removed from the sample. Lastly, a random sample generator was used to extrapolate 200 samples with each having an equal chance of being included in the sample.

Table 3

Sample Demographics

Demographic Category	Percentage			
	CB	NCB	CB	NCB
Setting				
Connecticut	11	12	12.1%	18.2%
Texas	28	53	30.8%	80.3%
Illinois	52	3	57.1%	1.5%
Military Service				
National Guard	6	2	6.6%	3.0%

Active Duty	1	1	1.5%	1.1%
Gender				
Female	15	17	16.5%	25.8%
Male	75	48	82.4%	72.7%
Ethnicity/Race				
Asian	0	6	0.0%	9.1%
Black	0	6	0.0%	9.1%
Latino	15	8	16.5%	12.1%
Multi-Racial	4	2	4.4%	3.0%
Native American	1	1	1.5%	1.5%
White	70	50	76.9&	75.8%
Household				
Single	38	26	41.8%	39.4%
Married/Partner	38	31	41.8%	47.0%
Divorced	10	7	11.0%	10.6%
Separated	4	1	4.4%	1.5%
Non-Disclosed	1	1	1.1%	1.5%
Year in School				
Freshman	6	6	6.6%	9.1%
Sophomore	6	8	6.6%	12.1%
Junior	26	14	28.6%	21.1%
Senior	38	26	41.8%	39.4%
Graduate	14	11	15.4%	16.7%

Non-Disclosed	1	1	1.1%	1.5%

Combat Veterans.

A combat veteran is an individual that has served in any United States Armed Forces (USAF) branch and experienced hostilities of any level or taken part in an action of enemy combatant for a certain duration as a result of friendly, defensive, or offensive fire military action that involves a perceived or real enemy in a post- or pre-determined combat proceeding (VA.org., 2021). This sample of combat veterans mostly attended a university in Illinois 51 (56.7%). The largest proportion was male at 75 (83.3%), were white 70 (77.8%), were single 38 (42.7%), and were seniors in college 38 (42.2%). The overwhelming percentage of participants being white, and male indicates that the overall results of this research will be more representative of white and male perspectives than of minority or female perspectives. Again, the results of this research will have increased generalizability with similar populations and decreased generalizability in differing populations. These demographics are, however, closely aligned to the demographic averages which state that in 2018, 77% of military members were White and 82% were male (Council of Foreign Relations, 2022).

Non-Combat Veterans.

A non-combat Veteran is defined as a service member with no history of combat (Johnson et al., 2010). Title 38 of the Code of Federal Regulations defines a veteran as “a person who served in the active military, naval, or air service and who was discharged or released under conditions other than dishonorable, if they were not dishonorably discharged (VA.org., 2021). This sample of non-combat veterans mostly attended a university in Texas 55 (50%). The largest

proportion was male at 81 (73.6%), were white 80 (72.7%), were married 48 (43.6%), and were seniors in college 40 (36.4%).

The overwhelming percentage of participants being white, and male indicates that the overall results of this research will be more representative of white and male perspectives than of minority or female perspectives. Again, the results of this research will have increased generalizability with similar populations and decreased generalizability in differing populations. These demographics are, however, closely aligned to the demographic averages which state that in 2018, 77% of military members were White and 82% were male (Council of Foreign Relations, 2022).

Setting

The setting for this study was three universities from three geographic areas (Northeast, Midwest, South) in the United States. For this study, the number of participants was 200. This was a convenience sample because the archival (ex post facto) data was provided to the researcher and conveniently obtained.

Instrumentation

Veteran Adjustment to College Scale

In the present study, the VAC was used to gain insight into adjustment to college from the collective score from three factors, student stress, belonging, and social support for student veterans (combat veterans and non-combat veterans) in institutions of higher education. Young (2017) had created the VAC survey and was the first to pilot and validate it. The VAC can be used by veterans' services staff, student affairs professionals, and researchers examining veteran adjustment to college. The VAC survey has been comprised of 13 items that were derived from various other surveys. The survey response time took approximately 10 to 15 minutes to

complete.

To develop and validate the VAC, Young (2017) had surveyed a sample of 391 student veterans that was similar and demographically represented the armed forces. The VAC survey was developed and validated in 2017, and the overall Cronbach's alpha score for this scale was 0.82 meaning that this scale has good internal validity and practitioners can trust the consistency of this scale to measure military student adjustment to college accurately (Young, 2017). The VAC has been categorized into three subsets of questions: items 1, 3, 5, 7, 11, and 13 measured belonging ($\alpha = 0.72$), items 2, 4, 6, and 7 measured social support ($\alpha = 0.71$), and items 7, 8, 9, 10, and 12 measured student stress ($\alpha = 0.70$). Consequently, the survey has measured student veterans' adjustment to college.

There have been several reasons why this particular survey instrument was chosen. First, it was fit to answer the research questions in the study. Second, the components of the survey represented the variable of interest in the study adjustment to college. The intended target participant for the VAC survey was student veterans, which was a match to the target population for this study student veterans. Young (2017) recommended an extension of the study to include factors that affect student veterans' adjustment to college, and this was the intended target population of this study. The VAC scale also measured the variable in the research questions, adjustment to college.

The adjustment to college was measured in three factors; belonging that was measured by the five-question belonging component with scores ranging from 5 to 25. Belonging represents how well the active or former student veterans who were attending colleges, how they fit in with campus socially, and how they felt they had adjusted to the college environment from the military. The social support was measured with the three-question social support component of

the VAC scale with scores ranging from 3 to 15. Social support reflected the former military student's feeling of receiving support and understanding from people on campus. Student stress was described as the ability of the active or former military student veteran to be able to handle the course work through time management and responsibility and was measured with the three-question factor of the VAC student stress with scores ranging from 4 to 20.

The VAC has a scoring range between 12-60, the higher the scores indicate a better adjustment to college, while the lower the score would be indicative of the difficulty of adjustment to college. Scores lower than 44 may indicate difficulty with adjustment to college. To score the scale, Young (2017) employed a five-point Likert scale and scored each of the 12 items in the VAC as follows, Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), Strongly Disagree (1) Reverse Coded Items: 1, 3, 5, and 10 were utilized to avoid survey bias. (Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), Strongly Disagree (5). Young (2017) gave the researcher permission to use the instrument as well as the archival data (see Appendix B). Permission to use the instrument and archival data was granted by Young (2017) (see Appendix B).

Reliability

As a measure of reliability Young (2017) ran the internal consistency of each factor by computing Cronbach's alphas. Belonging was $\alpha = .72$, social support was $\alpha = .80$, and student stress was $\alpha = .71$ (Young, 2017). Inter-item correlations have been considered acceptable when the $\alpha \geq .70$ (Cronbach's alpha) (Kline, 2000). No other researchers have used the VAC as of this time and Young carried out a subsequent study that analyzed the scaled questions from the VAC as a qualitative study (Young, & Phillips, 2019). The VAC is an appropriate instrument to use in this study because it is a reliable and valid measure of variables used in this study.

The VAC had been developed and analyzed by utilizing a Principal Component Analysis method, which resulted in the three-factor survey the VAC labeled belonging, social support, and student stress. To select the number of factors, Young (2017) has utilized two criteria: eigenvalues greater than 1.0 and Cattell's (1966) scree test. Three factors with an eigenvalue higher than 1.0 were extracted, and the scree test confirmed this result with a 57.8% variance. According to Young (2017), two items, 7 and 11, had cross-loadings higher than .30, and if the ratio between item loadings is lower than 2, it should not be considered a pure marker of the factor. However, the item can be retained if the ratio is higher than 1.5 (Barbaranelli et al., 2007). The results for the ratio for item 7 was 1.33 so, the item was dropped (Young, 2017); and the ratio for item 11 was 1.94, so the item was retained as an indicator for factor 1 (Belonging). The resulting survey showed that belonging (Factor 1) accounted for 29.6% of the total variance, while social support (Factor 2) accounted for 16.7%, and college stress (Factor 3) for 11.9% of the total variance (Young, 2017).

Table 4

Internal Reliability of Veteran Adjustment to College Scale

Veteran Adjustment to College Subscales	Items	Cronbach's alpha
Belonging	5	.72
Social Support	4	.71
Student Stress	5	.70

Note. Adapted from Young, 2017

Belonging.

For college students to pursue self-actualization and self-esteem they must first develop a sense of belonging. (Bettencourt, 2021). Sense of belonging has been used to gauge students'

adjustment to and persistence within higher education, and belonging was viewed as something that students themselves manifested rather than was facilitated by institutions. (Bettencourt, 2021). Student veterans have reported having less of a sense of belonging on campus than civilian students Durdella and Kim (2012). According to Elliott (2015) veterans that have military-related PTSD predicts an even lower sense of belonging on campus Compared to their civilian counterparts, veterans are more likely to feel a sense of belonging from campus administrators and connect more with faculty members (Cole & Kim, 2013).

Social Support.

Social support has been found to mitigate the effects of PTSD, psychological distress, loneliness, and depression (Elliott et al., 2011; Guay et al., 2006; Pietrzak et al., 2009). Social support is necessary for handling transitions (Goodman et al., 2006). Within the military ethos, there is a support system (formal and informal) that provides clear and consistent social, medical, and psychological support (Young, 2017).

Student Stress.

Student stress has been well chronicled in the literature as having a negative relationship with academic performance (Akgun & Ciarrochi, 2003). Adaptation to an educational environment can be a stressful process for collegegoers (e.g., Towbes & Cohen, 1996), particularly student veterans who face distinct challenges as they transition to college and higher education (e.g., DiRamio et al., 2008; Ghosh & Fouad, 2016; Knapp, 2013; Radford, 2009). Student veterans, like other students, experience stress related to academic, and work demands, home life demands, and internal struggles (Young, 2017). The stress experienced by veterans can also be specific to their experiences in the military (Young, 2017; Young & Phillips, 2019).

Procedures

The independent and dependent variable data required for this study was contained within the archival data from the VAC. Before analyzing this data, the researcher obtained permission to conduct the research from the Liberty University Institutional Review Board (IRB). The first step required to gain approval for this study and methodology from the researchers' dissertation committee chair.

Following approval from the committee chair, the researcher filed for an exempt application that can be used based on the Research Exemption Request Guidelines. Special care was taken to ensure that "No" was the appropriate response to the eight exemption screening questions before submitting the exempt application to the dissertation chair for review and signing. The exempt application was chosen for this study because the research involved study required the use of ex-post-facto data and could not be indirectly or directly associated with the research participants. Once this was accomplished, the form and additional required documentation were submitted to the IRB in both hard copy and electronic formats. Once IRB board approval was granted (see Appendix A) the data was provided to the researcher in an email as raw data that was then analyzed.

Data Analysis

To analyze the data for the research hypothesis a one-way multivariate analysis of variance (MANOVA) was conducted. The use of MANOVA enabled a single test to evaluate the null hypothesis. Since the researcher was attempting to determine if two groups' mean scores differ on multiple dependent variables, MANOVA was the most appropriate statistical analysis and the effect size will be reported using n^2(Warner, 2021). The researcher investigated whether there was a difference between combat veterans and non-combat veterans' adjustment to college

and perceptions of adjustment to college as determined by the sub-scales of the VAC. The results of this analysis allowed for inferences about potential cause and effect relationships that may exist between student veterans' combat status and perceptions of adjustment to college.

Several assumptions must be considered when conducting a MANOVA. First, the MANOVA requires two or more independent variables and all observations to be independent (Green & Salkind, 2014). The groups identified as independent variables for this study were combat veterans and non-combat veterans. Participants identified themselves as combat veteran or non-combat veteran and their responses could not be manipulated by the researcher. Participants were not able to choose both combat veterans and non-combat veterans; participants were not able to change their responses after data was collected.

A MANOVA requires that there are two or more dependent variables, each dependent variable must be continuous. The VAC was disaggregated into three sub-scales, which were then disaggregated into 12 items. Items are considered interval in nature when individual ordinal items are aggregated into sub-scales with established reliability and validity (Gabriel & Sen, 1968; Zhang et al., 2014). Based on this consideration of interval scales as continuous the assumption that the dependent variables used herein are continuous is met.

Before conducting the data analyses, data was be screened to identify possible issues. Data screening was conducted on each group's dependent variables (belonging, social support, student stress) regarding data inconsistencies and outliers. Data were sorted and transformed into z-scores to identify any unusual entries and boxplots will be constructed to identify possible outliers.

Any identified multivariate and univariate outliers were examined and ultimately suppressed based on the results of the boxplots (Warner, 2021). This process fulfilled the

assumption that the MANOVA requires there to be no multivariate or univariate outliers (Green & Salkind, 2014). The dependent variables for hypothesis one were measured on the interval level and the observations within each variable were independent as each participant was assigned to just one of the groups.

MANOVA requires a normal data distribution regardless of any linear combination of variables (Warner, 2021). Shapiro-Wilk's statistic was conducted to determine if each sub-scale is statistically different from a normal distribution. Normality was examined via histograms and the, as more than 50 participants comprise each group. A scatterplot matrix was constructed to test the assumption of multivariate normal distribution and the researcher examined for a classic "cigar shape," which would imply if a linear relationship existed between the dependent variables.

The assumption of homogeneity of variance-covariance matrices was tested via Box's M test of equality of covariance. Warner (2021) insisted that when the Box's M test is significant, Pillai's traces can be reported instead of Wilk's lambda (Λ) as the overall test statistic. Warner (2021) due to its robustness recommended a Pillai's trace to check for any violation of homogeneity of variances and covariances.

To test for the absence of multicollinearity, a Pearson product-moment correlation coefficient, *r*, was calculated to determine if the dependent variables, belonging, social support, and student stress were correlated. Levene's Test of Equality of Error Variance was used to test the assumption of equal variance.

The final assumption of a MANOVA is an appropriate sample size (Green & Salkind, 2014; Warner, 2021). A power and effect size analysis determined that the minimum sample size needed to achieve a medium effect size (f^2= .25), a power of .70, and an alpha level of α = .05

(Gall et al., 2007) is 200 participants (approx. 100 for each independent variable) (see Appendix E) for analysis steps. The results of the data analysis were presented in Chapter Four.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative, non-experimental, causal-comparative, ex post facto study was to examine the differences in perceptions of veteran adjustment to college between combat veterans and non-combat veterans. For this study, the independent variable(s) were combat veterans and non-combat veterans. The dependent variable(s) was student veterans' perceptions of adjustment to college as measured by the Veteran Adjustment to College Scale (VAC).

Research Question(s)

RQ1: Is there a difference in perceptions of veteran adjustment to college as measured by the Veteran Adjustment to College between combat veterans and non-combat veterans?

Null Hypothesis

$H_0$1: There will be no difference in perceptions between adjustment to college as measured by the Veteran Adjustment to College between combat veterans and non-combat veterans.

Descriptive Statistics

The researcher utilized SPSS 28 to execute the analysis for the dependent variables in this research. Descriptive statistics (see Table 5) for each dependent variable were reported based on the independent variable student veteran status (combat or non-combat).

Table 5

Descriptive Statistics

VAC Sub-Scales	Veteran Status	*M*	*SD*
Belonging	Combat	13.13	3.94
	Non-Combat	15.51	4.25
Social Support	Combat	10.47	2.88
	Non-Combat	11.07	2.38
Student Stress	Combat	16.00	3.00
	Non-Combat	16.00	2.65

These statistics illustrate that combat veterans scored lower on all factors of the VAC belonging, social support, and student stress. The sub-scale for belonging contained more questions (5) than social support (4) and student stress (3), so it had a higher probability of potentially having a higher score. Although belonging had the higher probability for the highest scores, student stress had the highest scores overall.

Assumption Tests

The multivariate analysis of variance (MANOVA) was used in nonexperimental research, to examine the differences between naturally occurring groups (Warner, 2021). The use of MANOVA enabled a single test to evaluate the null hypothesis. Since the researcher was attempting to determine if two groups' mean scores differ on multiple dependent variables, MANOVA was the most appropriate statistical analysis and the effect size will be reported using n^2(Warner, 2021). The MANOVA requires two or more independent variables, or one independent variable with multiple groups, and for all observations to be independent (Green &

Salkind, 2014). The groups identified as independent variables for this study are combat and non-combat veterans. Participants self-identified as combat or non-combat veterans.

Their responses were not manipulated by the researcher. A MANOVA required the presence of two or more dependent variables with each dependent variable continuous in nature. The VAC was disaggregated into three sub-scales which are further composed of 12 items. The three study factors are measured using a validated instrument that provided continuous data. Likert scales produce mostly ordinal data (Brown, 2011), but the data can be approximated to interval measures. Scales that aggregate multiple items measured in a Likert scale can be considered interval in nature (Brown, 2011); when individual ordinal items are aggregated into sub-scales with established reliability and validity, these items are then considered intervals (Zhang et al., 2014). This consideration of interval scales as continuous fulfills the assumption that the dependent variables included herein are continuous.

Data Screening

Data were screened for inconsistencies and extreme outliers. Visual representations of the data were provided in the form of box plots (see Figure 2 and 3). Reexamination of the data was performed to determine if there were an entry error.

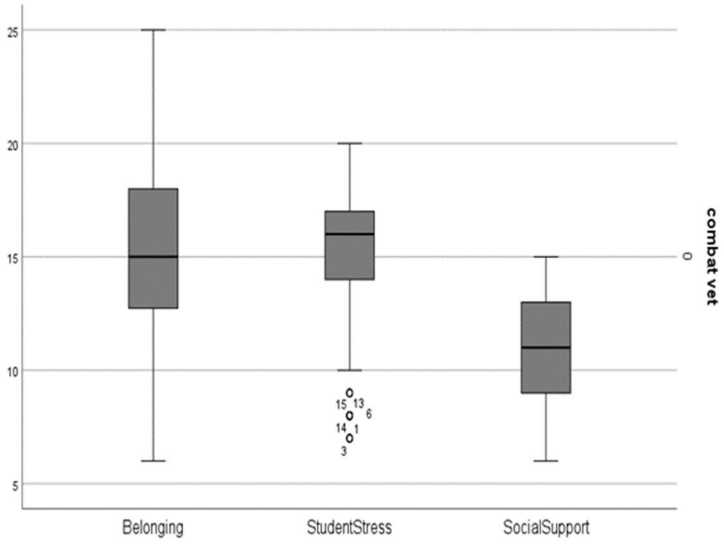

Figure 2.

Boxplots Non-Combat Veterans

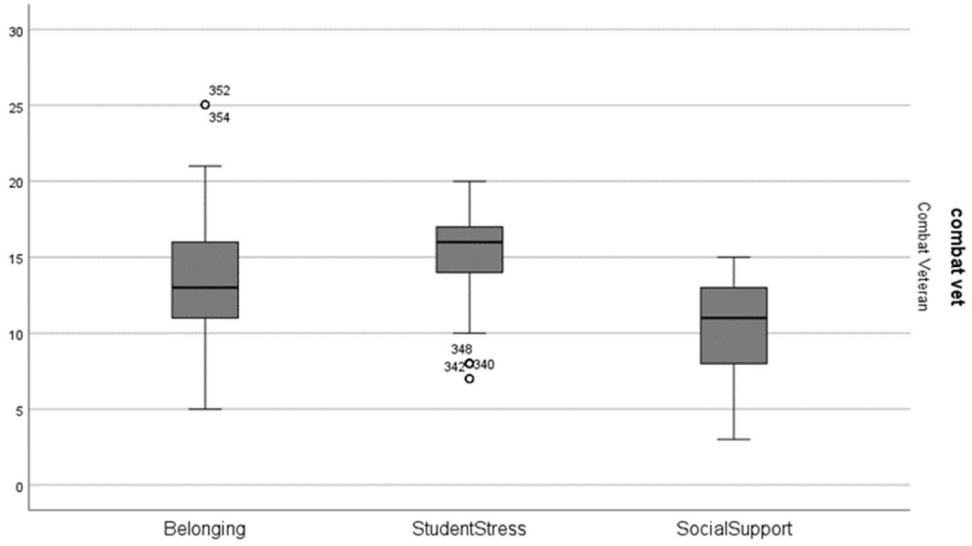

Figure 3.

Boxplots Combat Veterans

Assumption of Normality

MANOVA requires a normal data distribution irrespective of any linear combination of variables (Warner, 2021). Skewness and kurtosis coefficients were calculated (see Table 6) to

evaluate normality (Bono et al., 2019). These values indicated that most of the independent and dependent variable combinations demonstrated a negative skew with a standard error of .172 for combat veterans and non-combat veterans except for belonging with positive skew statistics of .205. The mild to moderate negative skew indicates that some scores were lower than the average. These values also indicated negative kurtosis for almost all independent and dependent variable combinations with a standard error of .342 for all kurtosis coefficients with the exception being student stress at .830. Positive kurtosis is associated with thicker tails and a "pointy" distribution this was observed for student stress. Kurtosis was negative for belonging and social support scores in combat veterans and non-combat veterans, indicating lighter tails and a flatter curve than the normal distribution.

Table 6

Skewness and Kurtosis

Statistics: Skewness and Kurtosis			*Subscales*		
Non-combat veteran			*Belonging*	*Social Support*	*Student Stress*
	N	Valid	110	110	110
		Missing	0	0	0
	Skewness		.184	.085	-.753
	Kurtosis		-.508	-.727	1.145
Combat Veteran	*N*	Valid	90	90	90
		Missing	0	0	0
	Skewness		.154	-.525	-.811
	Kurtosis		-.055	-.393	.546

Though negative and positive skew and slight positive and negative kurtosis are evident, the departure from normality does not make a substantive difference in the overall analysis. Data normality is determined using the skewness ratio and kurtosis ratio. To determine the skewness ratio the skewness value is divided by the skewness error standard, and to determine the kurtosis ratio the kurtosis value is divided by the kurtosis error standard (Sejati et al., 2019). If the ratio value is between -2 to +2, then the data distribution is considered normal (Sejati et al., 2019). The indicated analysis values seen in the analyses do not indicate a departure from normality.

The Shapiro-Wilk statistic was also applied to evaluate the assumption of normality (Mishra et al., 2019). The Shapiro-Wilk was used because it can be used on larger populations and is accepted as a more powerful test of normality (Khatun, 2021). Consistent with the skew and kurtosis coefficients, departures from normality are evident in the Shapiro-Wilk results (see Table 7). Belonging is the only sub-scale that met the assumption of normality.

Table 7

Shapiro-Wilk

Sub-Scale	Student Veteran Status	Statistic	Df	Sig.
Belonging	Combat	.985	90	.418
	Non-combat	.982	110	.147
Social Support	Combat	.951	90	.002
	Non-Combat	.954	110	<.001
Student Stress	Combat	.929	90	<.001
	Non-Combat	.944	110	<.001

Based on these statistics it would suggest that the rejection of the null would be warranted, due to a significant departure of normality. In this case, belonging would be the only factor that showed a *p-value* greater than .05. But while statistical tests have the advantage of making a judgment of normality that is objective there is also the disadvantage of being overly sensitive to large sample sizes and based on the central limit theorem when a sample size has 100 or more observations, violation of the normality is not a major issue (Mishra et al., 2019). Furthermore, in addition to the Shapiro-Wilk statistics, histograms were created for visual investigation of normality (see Figures 2-7). The histograms depict a mild to moderate negative skew for student stress for non-combat veterans and a mild positive skew for belonging and social support. For non-combat veterans belonging was moderately negatively kurtotic for belonging and social support and moderately kurtotic for student stress, and mild deviation from normality which showed consistency with the skew, kurtosis, and Shapiro-Wilk. For the combat veterans the histograms depicted a slight positive skew for belonging and a mild negative skew for social support and student stress. The histograms for combat veterans further depicted a slightly negative kurtosis about belonging, mild negative kurtosis regarding social support, and a mild positive kurtosis resulting in student stress.

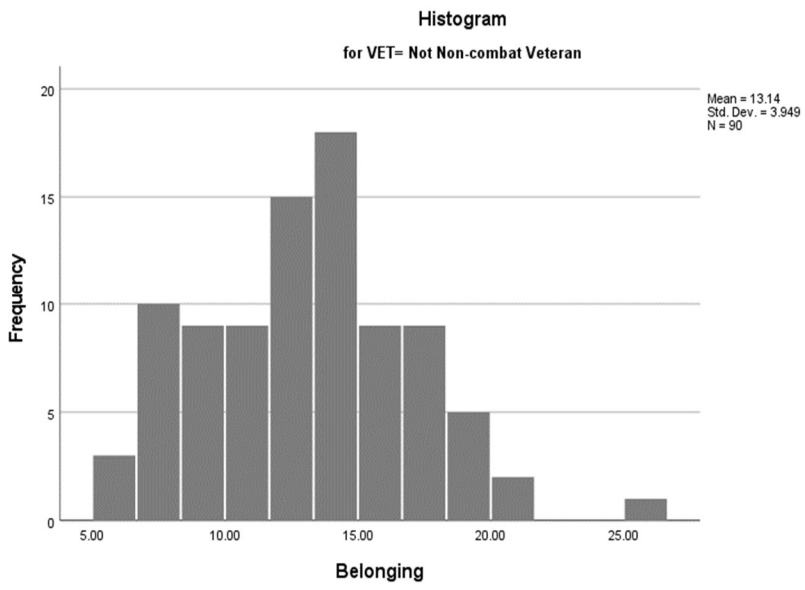

Figure 4.

Combat Veterans vs. Belonging

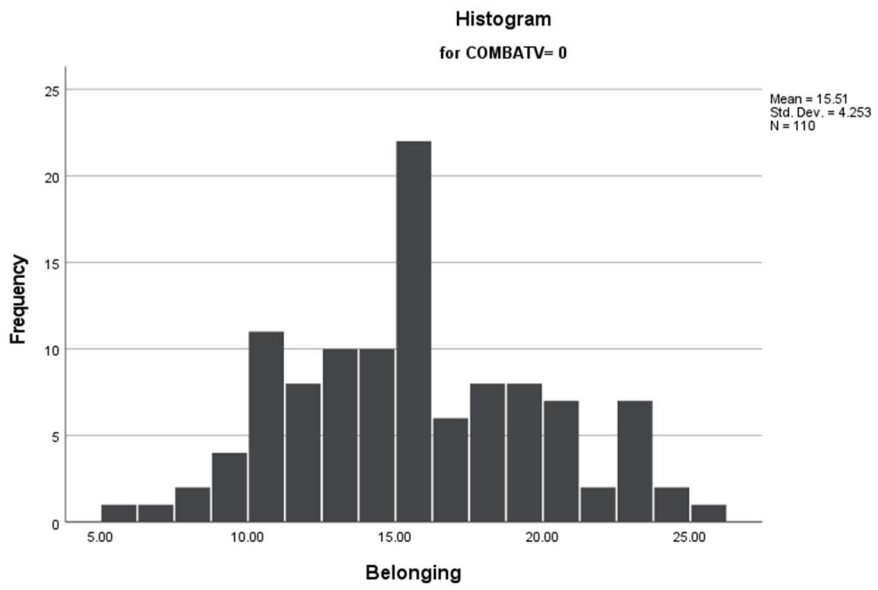

Figure 5

Non-Combat Veterans vs. Belonging

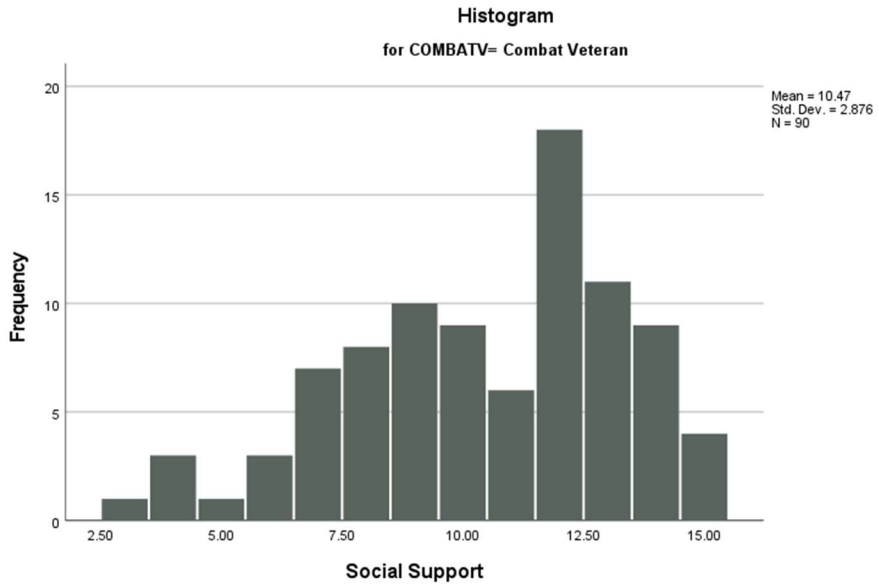

Figure 6

Combat Veteran vs. Social Support

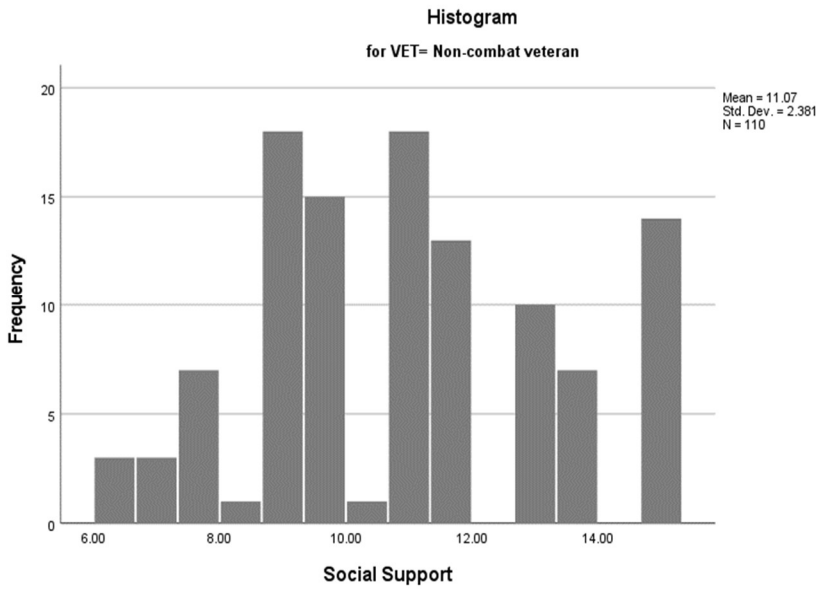

Figure 7.

Non-Combat Veterans vs. Social Support

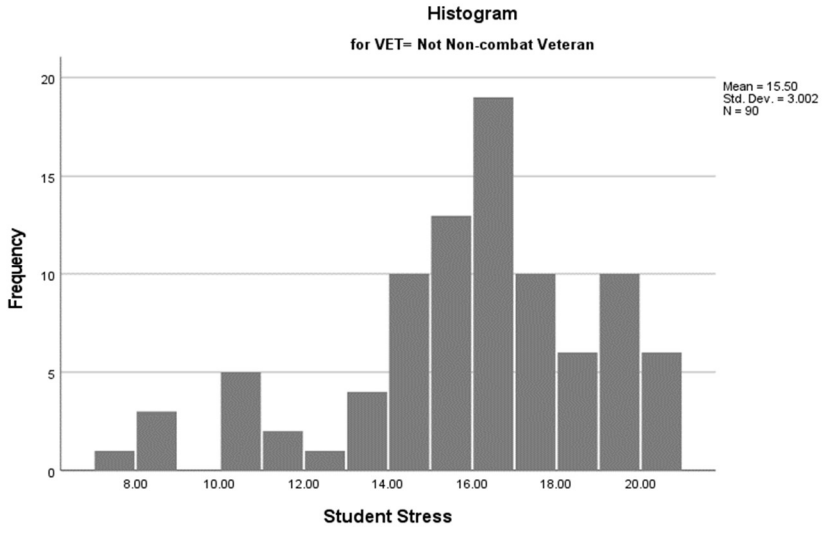

Figure 8.

Combat Veterans vs. Student Stress

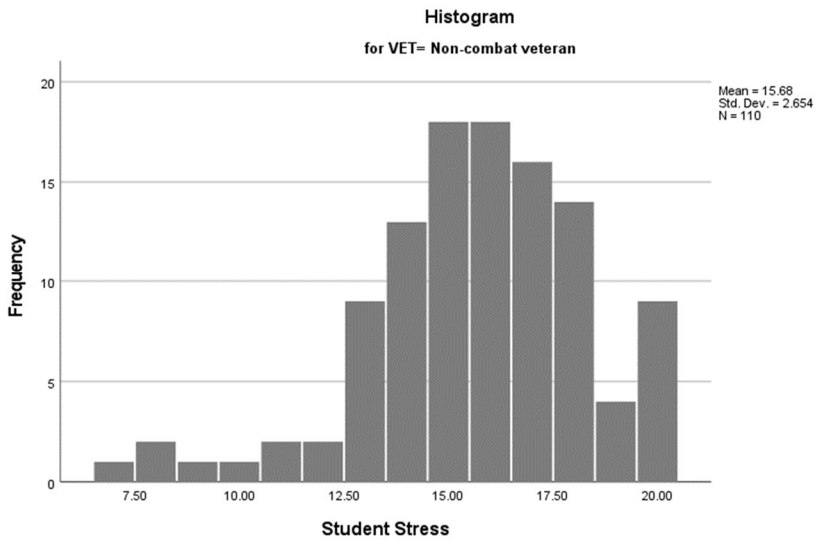

Figure 9

Non-Combat Veterans vs. Student Stress

One advantage of using a one-way MANOVA is that it is a robust statistical measure to deviations from normality, especially when the sample is large and the group sizes are the same (Queen et al., 2002), another advantage is that the use of a MANOVA is that it 'controls' for the increased risk of Type 1 error (Ogujiuba et al., 2021). Tabachnick and Fidell (2007) suggested that data should only be transformed if the data is markedly skewed if there are many outliers; outliers would be indicated by an asterisk (*) would be indicated, or there are heterogeneous variances which is not the case with this analysis. Psychologists have considered values to be univariate outliers whenever they are more extreme than the mean plus or minus the standard deviation multiplied by a constant, where this constant is usually 3, or 3.29 (Fidell et al., 2013). This data did not exhibit any of those qualities, hence the researcher continued with the MANOVA using the raw scores.

Assumption Testing

Assumption of Multivariate Normal Distribution

Matrix scatterplots were used to provide a visual representation of the data, allowing for an investigation of the assumption of multivariate normal distribution (Green & Salkind, 2014). The matrix scatterplots (see Figure 8) revealed an acceptable linear relationship between dependent variables. Box plots (see Figure 9) provided an additional visual representation of the data facilitating an examination of the assumption of univariate outliers. The data were reexamined for measurement and entry errors. Utilizing the Mahalanobis distance test (Warner, 2021) verified that there were no univariate outliers. For this study, the sample (n=200) was based on three universities with 397 total participants.

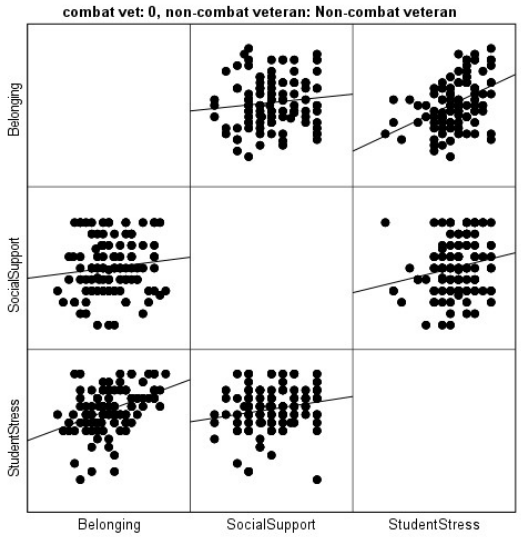

Figure 10

Scatter Plot Matrix

Assumption of Multicollinearity

Any correlation over .80 would present a concern for multicollinearity even though there should be a moderate correlation among the dependent variables (Warner, 2021). If there was the

existence of multicollinearity, then that could mean that the independent variables are related thus making the results unreliable. A Pearson Product Moment correlation test revealed that there was no evidence of multicollinearity; thus, the assumption of multicollinearity was met.

Table 8

Pearson Product Correlation

	Belonging	Social Support	Student Stress
Belonging	1	.077	.340**
Social Support	.077	1	.286
Student Stress	.340**	.286**	1

Note. ** Correlation is significant at the 0.01 level (2-tailed).

Assumption of Homogeneity of Variance-Covariance

To test and determined if the assumption of homogeneity of variance-covariance was met, Levene's Test of Equality of Error Variance was conducted utilizing IBM SPSS 28 (Green & Salkind, 2014). The null hypothesis of equal variances is rejected for the factors of belonging and student stress due to the *p-value* being greater than 0.05. For social support the *p-value* was less than 0.05, thus violating the homogeneity of variance needed for a MANOVA (see Table 9). But since there is roughly an equal sample size of 90 to 110 then equal population variances are not needed. Due to the population size, an alternate more robust test to evaluate the homogeneity of variance-covariance was Box's test of covariance was used.

Table 9

Levene's Test of Equality of Error Variance

Sub-Scale	Levene Statistic	Significance
Belonging	.615	.434
Social Support	5.26	.023
Student Stress	.822	.366

The Box's test of covariance between the groups of dependent variables was determined at the $p = .05$. The observed covariance matrices for the dependent variables where the Box's M value equaled 9.293, and $p = .166$; therefore, the assumption of homogeneity of variance-covariance matrices were met. The Box test is more robust in this analysis due to the participant sample size.

Results

A one-way MANOVA was used to determine the presence and significance of differences in perceptions of veteran adjustment to college among combat veterans and non-combat veterans. The MANOVA procedure configures and collates a lineal composite of the dependent variables. MANOVAs are especially helpful when attempting to use the variables to measure underlying constructs (Warner, 2021).

Null Hypothesis

The null hypothesis proposed that there were no differences in perception of veteran adjustment to college for combat veterans and non-combat veterans as measured by the Veteran Adjustment to College Scale. The MANOVA (see Table 10) determined, however, that there was

a statistically significant difference between combat veterans and non-combat veterans' perceptions of adjustment to college on the combined dependent variables, Wilks' $\lambda = .906$, F (1, 198) = 6.808, $p = < .05$; partial $\eta^2 = .094$. Due to the statistical significance proven in this study, the null hypothesis is rejected.

Table 10

MANOVA Role

	Value	*F*	Sig	Partial η^2	Observed Power
Pillai's Trace	.094	6.808	< .001	.094	.975
Wilk's Lambda	.906	6.808	< .001	.094	.975
Hotelling's Trace	.104	6.808	< .001	.094	.975
Roy's Largest Root	.104	6.808	< .001	.094	.975

Pillai's Trace is typically a more robust measurement and is the favored measurement when sample sizes are unequal, and Box's M is statistically significant. However, in this research, the group sample sizes were roughly equal, and the Box's M was not statistically significant. A partial eta square value of .094 indicates a large effect size (Warner, 2021); and an observed power of .975 indicates that there is a 97.5% chance that the statistic falls within the rejection range. What the MANOVA does not provide is detailed information about the level of statistical significance for each dependent variable, defined differences between groups are determined by post hoc tests (Warner, 2021).

Post-Hoc Tests

To investigate specified differences between groups, the researcher reviewed the results of the Tests of Between-Subjects Effects table (see Table 11). There was a significant difference

between combat veterans and non-combat veterans on the sub-scale belonging, F (1, 198) = 6.81, p = <.001, partial η^2 = .077. But, there was no evidence, however, of a significant difference between combat veterans and non-combat veterans' perceptions on the other sub-scales (Social Support and Student Stress) of the Veteran Adjustment to College scale.

Table 11

Test of Between-Subject Effects

Sub-scales	*F*	Sig.	Partial η^2	Observed Power
Belonging	16.49	<.001	.077	.981
Social Support	2.60	.108	.013	.362
Student Stress	.217	.642	.001	.075

Reliability

Cronbach's alpha was calculated for each subscale (Table 12). Coefficients greater the .70 are considered acceptable. However, when there are less than 10 items on a scale, coefficients greater than .5 are considered acceptable.

Table 12

Internal Reliability of Veteran Adjustment to College Sub-Scales

Veteran Adjustment to College Sub-Scales	Items	Cronbach's alpha
Belonging	5	.736
Social Support	3	.763
Student Stress	4	.706

Summary

Chapter four provided a comprehensive statistical analysis that examined the null hypothesis and research question posited in this research study. A one-way MANOVA was conducted to examine the difference in veteran adjustment to college based on two independent variables (combat veterans and non-combat veterans) utilizing the three dependent variables (belonging, social support, and student stress). Preliminary checks were performed to assess normality, outliers, linearity, homogeneity of variance-covariance matrices, and multicollinearity.

This began by addressing the assumptions of the MANOVA. The assumption of normality was not violated, and the research discussed non-violation and any potential remedies. The Shapiro-Wilks tests indicated that the dependent variable belonging was normally distributed at the (p >.05), supporting the assumption of univariate normality, but that social support and student stress were not. However, this deviation was explained by the adherence to the central limit theorem. All Mahalanobis' distance values were below 16.27 (Tabachnick & Fidell, 1996) supporting the assumption of multivariate normality and suggesting that there were no multivariate outliers.

Box plots indicated that there were only six mild outliers for the factor student stress. Scatter plots indicated that the dependent variables were linearly related in the belonging, social support, and student stress groups. The Box M test that the observed covariance matrices for the dependent variables where the Box's M value equaled 9.293, and p = .166; therefore, the assumption of homogeneity of variance-covariance matrices were met. The Pearson's correlation analysis suggested that the assumption of multicollinearity was met r = (.077, .340, .286), n = 200, p < .001. The null hypothesis was rejected, and the precedent post-hoc tests revealed that

the sub-scale (belonging), was a significant contributor to the differences between combat veterans and non-combat veteran's perceptions of adjustment to college, but there was not a statistically significant difference between combat veterans and non-combat veterans on the other sub-scales (social support and student stress) of the VAC. Chapter five will explore the results of this research in the setting of current literature.

CHAPTER FIVE: CONCLUSIONS

Overview

This chapter presents a discussion of the research question: Is there a difference in perceptions of adjustment to college as measured by the Veteran Adjustment to College Sub-Scales between (combat veteran and non-combat veteran) student veterans? The results of a MANOVA and subsequent post-hoc tests were discussed in conjunction with existing literature and the guiding conceptual framework. Contributions to literature, implications, consideration of limitations, and recommendations for future research are also be discussed.

Discussion

The purpose of this quantitative, non-experimental, causal-comparative, ex post facto study was to examine the differences in perceptions of veteran adjustment to college between combat veterans and non-combat veterans. A MANOVA was used to determine what differences, if any, exist between combat veterans and non-combat veterans' perception of adjustment to college. The results of the MANOVA indicated that there was a statistically significant difference between combat veterans and non-combat veterans' perceptions of adjustment to college on the combined dependent variables, Wilks' $\lambda = .906$, $F\ (1, 198) = 6.808$, $p = < .05$; partial $\eta^2 = .094$. This analysis produced a large effect size (Warner, 2021); approximately 9.4% of the variability in VAC scores across all sub-scales was accounted for by student veteran status. A power of .975 revealed that there was a 97.5% chance that the test statistic falls within the rejection range, limiting the chance of a type II error to 2.5%. This analysis resulted in a confident rejection of the null hypothesis.

To investigate specific differences between groups, the researcher reviewed the results of the Test of Between-Subjects Effects table. There existed a significant difference between

combat veterans and non-combat veterans' perceptions on the belonging sub-scale, F (1, 198) = 6.81, p = >.001, partial η^2 = .077. No significant differences between combat and non-combat veterans' perception of the other sub-scales (social support or student stress) existed.

If a MANOVA results in a significant outcome but the Test of Between-Subjects Effects table does not indicate specific significance, this means that all the variables must be considered for there to be a significant effect. This is primarily because the MANOVA is considered the influence of the interactions on all the variables. Consequently, all the sub-scales of the VAC must be considered together for there to be a significant difference between combat veterans and non-combat veterans. This finding supports the conceptual framework of Ackerman et al., 2008; DiRamio et al., 2008; Rumann & Hamrick, 2010 that intersecting identities as perhaps the most useful description of student veterans (combat veterans and non-combat veterans) of those presented about student veterans; were, numerous scholars of veterans have postulated that military identity becomes integrated into an individual's basic view of self and that to belong, you have to have social support, and reduced student stress and the interconnectedness of this variable affect the overall adjustment to college. What follows is a discussion of the Test of Between-Subject Effects results organized by sub-scale.

Belonging

Hinton (2020), states how student veterans' self-reported identity attachment might impact their higher education experiences as in their sense of belonging. Belonging in how student veterans felt included with or excluded from typical college students or the traditional college environment (Hinton, 2020). Student veterans are more likely to feel a sense of belonging and having military-related PTSD predicts an even less sense of belonging (Young, 2017). Many student veterans feel more of connectedness or sense of belonging from the

administrators and faculty than they do classmates due to the age difference and maturity level (Young, 2017). The questions that pertain to this constructor sub-scale discuss classmate immaturity, that combat or non-combat veterans feel bothered when others presume their military or combat experience, feeling they don't fit in, and that they have not made many non-military friends since coming to college, and that the adjustment has been hard. Student veterans that scored higher on this sub-scale of the VAC believe that they have gained a sense of belonging since coming to college.

The Test of Between-Subjects Effects revealed that there was a significant difference between combat veterans (M = 13.16, SD = 3.94) and non-combat veterans (M = 15.51, SD = 4.25) perceptions of belonging; F (1, 198) = 16.49, p = >.001, partial η^2 = .077. Further analysis revealed that the mean score for this subscale was 1.91 points lower among combat veterans versus non-combat veterans which meant the combat veterans' perception of belonging was significantly lower than non-combat veterans. This could align with the statement that military-related PTSD predicts an even less sense of belonging (Young, 2017), and combat veterans may exhibit some remaining exposure to combat trauma in the form of PTSD, moral injury, or TBI. Based on this sub-scale alone there is evidence that there was a difference between groups. Furthermore, research has found that the emphasis remains largely on assisting transitions to the campus community, with little attention to the transition to the classroom community where developing a sense of belonging is more crucial to their academic success (Blackwell-Starnes, 2018).

Social Support

Each branch of the military has its own "ethos" in how they take care of their own. The need for various forms of social support is consistently highlighted in literature and research on

student veterans (Vacchi et al., 2017). For community integration and social support peer support groups, also known as “self-help groups,” provide a unique tool for helping veterans working through the military-to-civilian transition (Drebing et al., 2018). Growing research evidence suggests that these groups are associated with measurable improvements in social support, clinical symptoms, self-efficacy, and coping (Drebing et al., 2018). Social support has been found to mitigate the effects of, psychological distress, PTSD, loneliness, and depression (Elliott et al., 2011; Guay et al., 2006; Pietrzak et al., 2009). A social support vacuum can be created for the student veterans (combat, non-combat) as they transition from the military supportive environment to that of the college campus (Young & Phillips, 2019).

The Test of Between-Subjects Effects revealed that there was not a significant difference between combat veterans (M = 10.47, SD = 2.88) and non-combat veterans (M = 11.07, SD = 2.38) perceptions of social support; F (1, 198) = 2.60, p = >.001, partial η^2 = .013. Further analysis revealed that the mean score for this subscale was 0.60 points lower among combat veterans versus non-combat veterans which meant the combat veterans’ perception of social support was only slightly lower than that of non-combat veterans, which was not significant enough between the two groups.

While that could align with the (Elliott, 2015) study that there were any lasting mental health benefits for student veterans of the social support received from peers during military service. However curiously that does not align, with the studies of (Winkle-Wagner, 2015), or (Hurtado et al., 1996), who studied African American and Latino students that showed that social support was shown to be a strong predictor in academic success. But, as was mentioned in the studies demographics where the generalizability of white male seniors in college could be defined in this study other ethnic groups could not.

Student Stress

Student veterans experience a unique set of stressors on campus. Some veteran stressors are both somatic and psychological (Young, 2017). Veterans returning from a military career or combat will experience organizational stress both in the classroom and on campus as they negotiate the university bureaucracy. Many combat veterans are experiencing posttraumatic stress symptoms secondary to their military service, and these symptoms are associated with academic dysfunction (Fredman et al., 2019). Stress during the learning process can have both a positive and negative effect on student outcomes (Lazarevic & Bentz, 2021).

Stress can enhance memory formation while at the same time hindering memory retrieval (Lukowiak et al., 2010). Further emphasized in the Lukwaik et al. 2010 study was the observation that depending on the specifics and perception of the stress memory formation and or it's recall may be impaired or enhanced; and stress may also play a role in false memory formation and PTSD. In a study, students found value in self-care training and the usefulness of incorporating self-care strategies to help balance their lives and manage stressful situations (Lewis & King, 2019). The Test of Between-Subjects Effects revealed that there was a not a significant difference between combat veterans (M = 15.50, SD = 3.00) and non-combat veterans (M = 15.68, SD = 2.65) perceptions of student stress; F (1, 198) =.217, p = >.001, partial η^2 = 001. Further analysis revealed that the mean score for this subscale was 0.18 points higher among non-combat veterans versus combat veterans which meant the combat veterans' perception of student stress was only actually slightly lower than that of non-combat veterans, which was not significant enough between the two groups.

Significant Demographic Factors

Demographic factors were not related to any specific hypothesis in this research, although current literature would imply and even demonstrates a significant relationship between demographic factors and a perception of belonging in the higher education environment (Morris et al., 2019). Morris et al. 2019, considered demographic factors that accounted for common and unique characteristics of the research group that examined how student veterans perceived available campus support structures, including targeted services specifically for this population, and the institutional/cultural context for utilization of these supports. The research considered the background (demographic factors) of student veterans to determine what they had in common and what was unique in the individual as far as characteristics.

Setting

Combat veterans attending higher education institutions reported the lowest level of belonging of any other demographic in this study. Conversely, non-combat veterans reported higher perceptions of belonging than their combat veteran peers. Where the study participants were from three universities it would be interesting to see what the results would have yielded had the target audience and participant opportunities been opened to included student veteran populations from universities and community colleges near large military bases.

Race and Ethnicity

Where the research hypothesis in this study did not consider or factor race or ethnicity as a factor that affected belonging, social support, or student stress. However, research has shown that in research conducted by Albright et al., 2017, ethnicity and race were not significantly associated with the use of campus mental health services seems to support existing research on the lack of association between ethnicity and race and VA mental health service use by student veterans. However, contradictory research on VA service use finds that minority veterans use

more mental health services (Elhai et al., 2008; Rosenheck & Fontana, 1994). This suggests that future research on student veterans should continue to explore potential disparities by ethnicity and race.

Year in School

Where year in school was also not considered a factor of the hypothesis it is worth noting that most of the participants (39%) were seniors. A study that was completed based on the year in school for Science Technology Engineering and Math (STEM) students revealed that in a follow-up post hoc analysis those seniors experienced higher levels of belonging in class and major compared to juniors, from a faith-based university (Smith et al., 2012). But when the study results were analyzed for the Historically Black College/University (HBCU) the inverse was shown that seniors reported lower levels of belonging in class compared to sophomores (Smith et al., 2012). Among an all-women's college, there was not a significant difference in belonging among the different grade participants (Smith et al., 2012), these results were also seen at a large teaching university. Consequently, it would be of interest to determine if the year of school is a factor in the perception of belonging for combat veterans and non-combat veterans' adjustment to college.

Implications

Previously, no quantitative instrument had been utilized in collecting comparison data on adjustment to college (belonging, social support, and student stress) among combat veterans and non-combat student veterans. Because most student veteran studies have not differentiated between combat veteran and non-combat veteran (student veterans), to measure adjustment to college. Furthermore, where there have been many studies on student veterans there has been a call for individuality, instead of the dearth of research that the individual student veteran has

received. College programs can say they are veteran-friendly but is it a 'canned-stamped' service offering or do the services offered focus on adjustment to college for the individual student veteran. Present literature indicates that as postsecondary institutions seek ways to attract student veterans, they ostensibly grapple with how to best support these men and women once they arrive on campus (Evans et al., 2015); and there needs to be a standard measurement of critical military-friendly practices that are based on military student input (Wilson et al., 2016).

Practical Implications

Blackwell-Starnes (2018) would represent that argument that this perception of belonging needs to be more classroom-oriented for the combat veteran and non-combat veteran (student veterans) to be successful and not suffer from attrition. Research has shown that the sense of belonging is a factor that serves to aid in the success of the student veteran (combat and non-combat veterans) despite the demographic changes in the veteran population, there is a need for additional research which considers how the student veterans' diverse backgrounds relate to their college experiences and outcomes (Fernandez, et al., 2019).

Student veterans may be far removed from a sense of belonging due to their military experience (Blackwell-Starnes, 2018). This brings the research back to the theoretical lens of transition as described by Schlossberg, and how combat veterans and non-combat student veterans cope with the stress of the transition. Do they use avoidance coping for the stress and hence stop coming to class as seen in the Blackwell-Starnes, 2018 study?

Young's (2017) study involved a more diverse population than that of this study. For example, Young (2017) had participants that were active duty, and national guard/reserves as part of the 2017 study versus this study where that population was a factor; but was not the focus of comparison between the two groups combat veterans and non-combat student veterans.

Furthermore, deployment could have been a factor in perceived belonging for the group surveyed in the Young (2017) study, if you must deploy as a national guard member or active-duty member during a semester that is disruptive to your attendance and could affect your overall sense of belonging. Other factors or sub-scales of the study such as perceived social support and student stress could also have been affected.

Approximately 80 participants in the Young (2017) study were either active duty or national guard/reserves, which meant they could be called up to deploy and that could cause perceived student stress due to often finding themselves transitioning back into the academic environment after deployments, that sense of student stress could have hurt the perception of belonging, and that could be the significant difference that was seen in the comparative groups of this research. Whereas this may be a limitation of this study not specifically focusing on (active duty and national guard/reserves) it may also serve to be a delimitation of this study in that the specific population of combat veterans and non-combat student veterans can be seen that perhaps may have been overlooked in the Young (2017) study. Young's (2017) participants were mostly upperclassmen (65%) when compared to (35%) underclassmen. Young (2017) sought to address a gap in the literature by researching student veterans to determine what stressors affected the transition to four-year colleges and what gave student veterans a perception of belonging and social support. Therefore, these findings might guide future research to gain a better understanding of adjustment to college for underclassmen who are more vulnerable to attrition compared to upperclassmen; thus, it will be important to research this population as well as the community college population.

Theoretical Implications

This study also aligned with the theoretical framework outlined in the study. The transition theory of Schlossberg built a solid theoretical foundation for this study in understanding that student veterans may utilize the 4 Ss to transition ---"situation," "self," "supports," and "strategies," as well as Lazarus and Folkman's (1984) stress and coping theory to understand how student veterans respond to perceived stress and use social support and strategies to utilize problem and emotional based coping mechanisms in their experiences in higher education and how that can affect the perception of belonging. Schlossberg (1981) cites three main coping responses identified in the Pearlin and Schooler (1978) study: "responses that modify the situation, responses that control the meaning of the problem, and responses that help the individual manage stress after it has occurred to help accommodate to existing stress without being overwhelmed by it" (p. 76).

Aligning with the Schlossberg transition theory (1981) and Lazarus and Folkman stress and coping theory (1984); these findings contributed to Schlossberg transition theory (1981) by reporting the comparison data on adjustment to college (belonging, social support, and student stress) among combat veterans and non-combat student veterans. In the Schlossberg theory, 4 Ss "situation," "self," "supports," and "strategies," could be related to each factor in detailing the assets and resources to which student veterans have access and the acute challenges, stressors, and anxieties they encounter in the transition from the military into higher education (Wilson et al., 2016).

The transactional model of stress and coping looked at the interaction between a person and their environment and the stress as a result forms an imbalance between demands and resources (Lazarus & Folkman, 1984). Combat veterans and non-combat student veterans like other students, experience stress related to schoolwork demands, home life demands, and internal

struggles (Young, 2017). Thus, according to Lazarus and Folkman (1984), individuals become stressed when demands or pressure exceed their resources or their ability to cope and control the stress. The actions and activities that help increase a sense of belonging and social programs that aid in reducing stress. Perceived student stress is shown to be associated and predictive of a lack of perceived belonging and perceived social support.

Previous studies used these theories as a lens to examine transition, stress, coping, and support factors for student veterans in colleges and universities (Griffin & Gilbert, 2015; Main et al., 2016; Young, 2017); however, it was not known if there a difference in perceptions of veteran adjustment to college as measured by the Veteran Adjustment to College between combat veterans and non-combat veterans. This empirical study generated evidence to validate the Schlossberg transition theory (1981) and Lazarus and Folkman's stress and coping theory (1984) as a theoretical lens in which to examine combat veterans and non-combat veterans regarding perceived belonging (M = 13.16, SD = 3.94) and non-combat veterans (M = 15.51, SD = 4.25) perceptions of belonging; F (1, 198) = 16.49, p = >.001, partial η^2 = .077. Combat veterans showed a significantly lower level of belonging in the higher educational setting when compared to their non-combat veteran peers. Where there was not a statistically significant difference between combat veterans and non-combat veterans perceived student stress and social support.

In a research study utilizing a path analysis, it was a direct pattern that was seen in which both depression symptoms and life satisfaction depend to a considerable degree on the sense of belonging, and that the belonging need influences, in a direct way, the coping focused on the search for social support (Wilczyńska et al., 2015). Belonging and the perception of a high level of belonging involved undertaking active techniques of coping, including a confrontation with a

stressful situation and its negative controlling impact (Wilczyńska et al., 2015). The study findings do support previous research that as student veterans (combat veterans and non-combat veterans) move through this unique life/career transition they must cope, adapt, and make decisions across many areas of their lives (Schlossberg et al., 2012), and that the 4 S's come into play that student veterans must evaluate the "situation," " determine "self," and the "supports," and "strategies" that they must use to navigate a transition into a civilian college student. By testing the research question and utilizing the main themes seen in the study it gives the researcher, administrators, veterans affairs officials, other veterans researchers, the ability to see (combat veteran and non-combat) student veterans that attend higher education institutions with a different lens than before. The findings from the results provided theoretical and practical, implications regarding the difference between combat veterans and non-combat student veterans perceived belonging is significant and although there was no statistically significant difference in the perceived social support and student stress more research would be needed to determine if those factors affected adjustment to college.

The use of the Veteran Adjustment to College Scale (VAC) in this study allowed for a new way for college administrators to examine how well their combat veterans and non-combat student veterans are adjusting to college. This study has demonstrated that the scale has good reliability and validity as a three-factor instrument since the Cronbach's alpha scores were similar to the scores of the original Young (2017) study. Student veterans' services officials may find the information gleaned from this study to be helpful for student veterans' programs and services. Having a better understanding of the adjustment of our combat veteran and non-combat student veterans may lead to improvement of veteran's support programs and help to increase retention of veterans in college (Young, 2017).

Limitations

The main limitation of the study was the use of self-reported measures because while self-reports are reliable across several ways of collecting data, inversely, self-reports may also be influenced by a wide array of biasing factors (Gomes et al., 2019). The scope of this study was limited regarding the data collection assuming that self-reported responses from respondents were not biased but truthful. However, even with the promise of anonymity and confidentiality may not have provided the researcher with honest and truthful responses from the respondents. There were several limitations from utilization of a causal-comparative non-experimental design that needed to be considered they were as follows: the findings of the research may have offered an incomplete message of causality between the IV and DV; due to there not being a need to control for extraneous variable(s) (Kucer, 2018); and causal comparative design included the potential for reverse causation where the dependent variable is actually the cause (Salkind, 2010). The final limitation of this exploratory study is the limitations cannot be conclusive until the results are repeated (Queirós et al., 2017).

The overwhelming percentage of the participants were white, male, seniors, which while the generalizability of those populations could be represented in the current research, other minorities and underrepresented groups could not, this a decreased generalizability in differing populations. Though the demographics did closely align with the demographic averages which state that in 2018, 77% of military members were white and 82% were male (Council of Foreign Relations, 2022). Similarly, the survey was only distributed by Young (2017), and respondents received from three universities, thus limiting the scope of the research, and community college students were not surveyed thus limiting the generalizability of university students and thus limiting the demographics to similar universities.

The values indicated that most of the independent and dependent variable combinations demonstrated a negative skew with a standard error of .172 for combat veterans and non-combat veterans except for belonging with a positive skew statistic of .205. The mild to moderate negative skew indicates that some scores were lower than the average. These values also indicated negative kurtosis for almost all independent and dependent variable combinations with a standard error of .342 for all kurtosis coefficients with the exception being student stress at .830. Positive kurtosis is associated with thicker tails and a "pointy" distribution this was observed for student stress. Kurtosis was negative for belonging and social support scores in combat veterans and non-combat veterans, indicating lighter tails and a flatter curve than the normal distribution. Fortunately, the central limit theorem could be employed as the Shapiro-Wilk statistic is often overly sensitive to small deviations from normality. One advantage of using a one-way MANOVA is that it was a robust statistical measure to deviations from normality, especially when the sample is large and the group sizes are the same (Queen et al., 2002), another advantage is that with the use of a MANOVA is that it 'controls' for the increased risk of Type 1 error (Ogujiuba et al., 2021).

Some of the participants were filtered or removed from the study because they checked that they were both combat veteran and non-combat student veterans suggesting that there was some ambiguity in how the question was worded. This resulted in 90 combat veterans and 110 non-combat student veterans that were randomized as participants. Also, the demographic questionnaire and the VAC did not allow for further elaboration by participants. Before this study, there was only one other quantitative study that was administered to analyze adjustment to college and that was the Young (2017) study, as the ex post facto data for this study came from the Young (2017) study there was not an opportunity to further refine the survey scale to

determine if a more robust analysis could result from the study's findings. The instrument developed by Young (2017) could be improved by adding additional questions for social Support (4) and student stress (3) so that each variable had the same number of questions: Belonging had (5) related questions, and the belonging questions could be refined to delineate between academic belonging and campus belonging. Due to the sparse use of the instrument, the reliability and validity could be limited.

Recommendations for Future Research

Further research could enhance and refine the results of the present study, as well as contribute to the breadth of knowledge in the field of student veteran studies. Furthermore, additional research is recommended in the following areas:

1. An investigation to determine whether race, age, gender, first-generation college students, serve as co-factors in the difference between combat veteran and non-combat student veterans' perception of adjustment to college.
2. A qualitative research design such as a case study, grounded theory, phenomenological, ethnographic, historical, descriptive, or action research to determine the difference between combat veteran and non-combat student veterans' perception of adjustment to college based on individual perceptions.
3. An investigation to determine if higher education institution type and program (college and universities, for-profit, private, public, graduate, online, and doctoral studies) play a part in determining the difference between combat veteran and non-combat student veterans' perception of adjustment to college.
4. A quantitative investigation on adjustment to college among combat and non-combat student veteran underclassmen that attend community college in the United States

that utilizes other quantitative research design(s) such as, correlational, experimental, quasi-experimental.

5. An investigation on perceived belonging, social support, and student stress among student veteran underclassmen that attend college in the United States in a mixed-method study.
6. An investigation on actions and activities that veteran service centers utilize to enhance combat veterans' and non-combat student veterans' perception of adjustment to college.
7. Reassessment and potential improvements to the current VAC instrument.
8. This research showed a statistically significant difference in perceived belonging between combat veterans and non-combat student veterans. Further research is needed to explore the difference between academic (classroom) belonging over campus belonging as a success factor for student veterans.

REFERENCES

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties*, *4*(2), 330-333.

Agimi, Y., Regasa, L. E., & Stout, K. C. (2019). Incidence of traumatic brain injury in the US Military, 2010–2014. *Military medicine*, *184*(5-6), e233-e241.

Akgun, S., & Ciarrochi, J. (2003). Learned resourcefulness moderates the relationship between academic stress and academic performance. *Educational Psychology*, *23*(3), 287-294.

Albright, D. L., Fletcher, K. L., Pelts, M. D., & Taliaferro, L. (2017). Use of college mental health services among student veterans. *Best Practices in Mental Health*, *13*(1), 66-80.

Alfonsi, S. (2018). Combat veterans coming home with CTE. Retrieved from: https://www.cbsnews.com/news/combat-veterans-coming-home-with-cte/.

Alosco, M. L., Mariani, M. L., Adler, C. H., Balcer, L. J., Bernick, C., Au, R., Banks, S. J., Barr, W. B., Bouix, S., Cantu, R. C., Coleman, M. J., Dodick, D. W., Farrer, L. A., Yonas, G. E., Katz, D. I., Koerte, I. K., Kowall, N. W., Lin, A. P., & Stern, R. A. (2021). Developing methods to detect and diagnose chronic traumatic encephalopathy during life: rationale, design, and methodology for the DIAGNOSE CTE Research Project. *Alzheimer's Research & Therapy*, *13*(1), 1-23.

Alschuler, M., & Yarab, J. (2018). Preventing student veteran attrition: What more can we do?. *Journal of College Student Retention: Research, Theory & Practice*, *20*(1), 47-66.

American Council on Education. (2018a). Academic Support: Service Member and Veteran Resources. http://www.acenet.edu/news-room/Pages/Academic-Support.aspx

American Council on Education. (2018b). Toolkit for veteran-friendly institutions. Retrieved from https://www.acenet.edu/news-room/Documents/Veterans-Toolkit-2018.pdf

Anderson, M. L., & Goodman, J. (2014). From military to civilian life: Applications of Schlossberg's Model for veterans in transition. *Career Planning & Adult Development Journal, 30* (3). 40-51

Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2006). *Introduction to research in education*. Cengage Learning

Babbie, E. (2013). *The basics of social research* (6th ed.). Wadsworth Cengage Learning

Barbaranelli, C., Caprara, G. V., Vecchione, M., & Fraley, C. R. (2007). Voters' personality traits in presidential elections. *Personality and Individual Differences*, *42*(7), 1199-1208.

Barry, A. E., Whiteman, S. D., & Macdermid Wadsworth, S. (2014). Student service members/veterans in higher education: A systematic review. *Journal of Student Affairs Research and Practice*, *51*(1), 30-42. doi:10.1515/jsarp-2014-0003

Bartone, P. T., & Homish, G. G. (2020). Influence of hardiness, avoidance coping, and combat exposure on depression in returning war veterans: A moderated-mediation study. *Journal of affective disorders*, *265*, 511-518.

Bartone, P. T., Johnsen, B. H., Eid, J., Hystad, S. W., & Laberg, J. C. (2017). Hardiness, avoidance coping, and alcohol consumption in war veterans: A moderated-mediation study. *Stress and Health*, *33*(5), 498-507.

Bauer, J. (2019). *Examining Success and Comfort Levels of Military Veteran Students Diagnosed with Posttraumatic Stress Disorder: A Quantitative Causal-Comparative Study*. (Doctoral dissertation, Northcentral University).

Bettencourt, G. M. (2021). "I Belong Because It Wasn't Made for Me": Understanding Working-Class Students' Sense of Belonging on Campus. *The Journal of Higher Education*, 1-24.

Blackwell-Starnes, K. (2018). “At ease: Developing veterans’ sense of belonging in the college classroom. Journal of Veteran Studies. 3(1), 18-36.

Blinka, D., & Harris, H. W. (2016). Moral injury in warriors and veterans: The challenge to social work. *Social Work and Christianity*, *43*(3), 7.

Bodrog, B., Gloria, A., & Brockberg, D. (2018). The effects of mattering and combat deployment on student service members/veterans’ college adjustment: A psychosociocultural approach. *Journal of Veterans Studies*, *3*(2), 109-125.

Bohan, S. (2018). The Stress Effect. In *Twenty Years of Life* (pp. 19-36). Island Press, Washington, DC.

Bono, R., Arnau, J., Alarcón, R., & Blanca, M. J. (2019). Bias, precision, and accuracy of skewness and kurtosis estimators for frequently used continuous distributions. *Symmetry*, *12*(1), 19.

Brown, J. D. (2011). Likert items and scales of measurement. *Statistics*, *15*(1), 10-14.

Brysbaert, M. (2019). How many participants do we have to include in properly powered experiments? A tutorial of power analysis with reference tables. *Journal of cognition*.

Burek, G. (2018). Military culture: Working with veterans. *American Journal of Psychiatry Residents' Journal*, *13*(9), 3-5.

Callahan, R., & Jarrat, D. (2014). Helping student service members and veterans succeed. *Change, 46*(2), 36-41. DOI:10.1080/00091383.2014.897189

Campbell, R., & Riggs, S. A. (2015). The role of psychological symptomatology and social support in the academic adjustment of previously deployed student veterans. *Journal of American College Health*, *63*(7), 473-481.

Castro, C. A., Kintzle, S., & Hassan, A. M. (2015). The combat veteran paradox: Paradoxes and dilemmas encountered with reintegrating combat veterans and the agencies that support them. *Traumatology*, *21*(4), 299.

Cate, C. A., Lyon, J. S., Schmeling, J., & Bogue, B. Y. (2017). *National veteran education success tracker: A report on the academic success of student veterans using the Post-9/11 GI Bill*. Retrieved from: http://nvest.studentveterans.org/wp-content/uploads/2017/03/NVEST-Report_FINAL.pdf

Caton, J. M. (2019). Serving those who served: Evaluation of evidenced-based veteran programs at college and universities. *College and universities Journal of Research and Practice*, *43*(3), 224-227, DOI:10.1080/10668926.2018.1449145

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate behavioral research*, *1*(2), 245-276.

Cohen, S., & Syme, S. L. (1985). Issues in the study and application of social support. *Social support and health*, *3*, 3-22.

Cole, J. S., & Kim, Y. M. (2013). Student veterans/service members' engagement in college and university life and education. *Washington: American Council on Education.* https://www.issuelab.org/resources/17903/17903.pdf

Cook, B. J., & Kim, Y. (2009). From Soldier to Student: Easing the Transition of Service Members on Campus. *American association of state colleges and universities*. https://www.acenet.edu/news-room/Documents/From-Soldier-to-Student-Easing-the-Transition-of-Service-Members-on-Campus.pdf

Correll, D. S. (2019). Why federal spending on veterans education benefits has soared nearly 250 percent. *Military Times*.

Coso, A. E., & Sekayi, D. (2015). Exploring the role of institutional climate in preparing engineering doctoral students for academic careers. In *American Society for Engineering Education Annual Conference and Exposition*.

Council of Foreign Relations. (2022). Demographics of the U.S. Military. Retrieved from https://www.cfr.org/backgrounder/demographics-us-military

Credé, M., & Niehorster, S. (2012). Adjustment to college as measured by the student adaptation to college questionnaire: A quantitative review of its structure and relationships with correlates and consequences. *Educational Psychology Review*, *24*(1), 133-165.

Creswell, J. (2015). Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. Pearson.

Darcy, M. C., Swagger, R., & Ferreira, M. C. (2018). Student veterans on campus: Next steps in program development. *Journal of Military and Government Counseling*, *6*(2), 2-19.

de Bengy Puyvallée, A., & Bjørkdahl, K. (Eds.). (2021). *Do-Gooders at the End of Aid: Scandinavian Humanitarianism in the Twenty-First Century*. Cambridge University Press.

Derefinko, K. J., Hallsell, T. A., Isaacs, M. B., Colvin, L. W., Garcia, F. I. S., & Bursac, Z. (2019). Perceived needs of veterans transitioning from the military to civilian life. *The journal of behavioral health services & research*, *46*(3), 384-398.

Dhar, B. K., Mutalib, M., & Sobhani, F. A. (2019). Effect of Innovation Capability on Human Capital and Organizational Performance.

DiRamio, D., Ackerman, R., & Mitchell, R. L. (2008). From combat to campus: Voices of student-veterans. *NASPA Journal*, *45*(1), 73-102.

DiRamio, D., & Jarvis, K. (2011). Veterans in Higher Education: When Johnny and Jane Come Marching to Campus: *ASHE Higher Education Report*, Volume 37, Number 3 (Vol. 149). John Wiley & Sons.

Dortch, C. (2017).*GI bills enacted prior to 2008 and related veterans' educational assistance programs: A primer* (CRS Report R42785). *Congressional Research Service*.

Dortch, C. (2018). Harry W. Colmery Veterans Educational Assistance Act of 2017 (PL 115-48). CRS Report R45205, Version 3. Updated. *Congressional Research Service*.

Drebing, C. E., Reilly, E., Henze, K. T., Kelly, M., Russo, A., Smolinsky, J., Gorman, J., & Penk, W. E. (2018). Using peer support groups to enhance community integration of veterans in transition. *Psychological Services*, *15*(2), 135.

Durdella, N. R., & Kim, Y. K. (2012). Understanding patterns of college outcomes among student veterans.

Dusselier, L., Dunn, B., Wang, Y., Shelley, M. C., II, & Whalen, D. F. (2005). Personal, health, academic, and environmental predictors of stress for residence hall students. *Journal of American College Health, 54*(1), 15-24. DOI:10.3200/JACH.54.1.15-24

Elhai, J. D., Grubaugh, A. L., Richardson, J. D., Egede, L. E., & Creamer, M. (2008). Outpatient medical and mental healthcare utilization models among military veterans: Results from the 2001 National Survey of Veterans. Journal of Psychiatric Research, 42, 858–867.

Elliott, M. (2015). Predicting problems on campus: An analysis of college student veterans. *Analyses of Social Issues and Public Policy*, *15*(1), 105-126.

Elliott, M., Gonzalez, C., & Larsen, B. (2011). U.S. military veterans transition to college: Combat PTSD and alienation on campus. Journal of Student Affairs Research and Practice, 48(3), 279–296.

Elnitsky, C. A., Blevins, C., Findlow, J. W., Alverio, T., & Wiese, D. (2018). Student veterans reintegrating from the military to the university with traumatic injuries: how does service use relate to health status?. *Archives of physical medicine and rehabilitation*, *99*(2), S58-S64.

Evans, J. J., Pellegrino, L., & Hoggan, C. (2015). Supporting veterans at the college and universities: A review of the literature. *College and universities Enterprise, 21*(1), 47-65.

Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2010). *Student development in college: Theory, research, and practice* (2nd ed.). Jossey- Bass.

Farnsworth, J. K., Drescher, K. D., Evans, W., & Walser, R. D. (2017). A functional approach to understanding and treating military-related moral injury. *Journal of Contextual Behavioral Science*, *6*(4), 391-397.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods*, *39*(2), 175-191.

Fernandez, F., Merson, D., Ro, H. K., & Rankin, S. (2019). Do classroom interactions relate to considerations of institutional departure among student veterans and service members?. *Innovative Higher Education*, *44*(3), 233-245.

Fidell, S., Tabachnick, B., Mestre, V., & Fidell, L. (2013). Aircraft noise-induced awakenings are more reasonably predicted from relative than from absolute sound exposure levels. *The Journal of the Acoustical Society of America*, *134*(5), 3645-3653.

Flink, P. (2017). Invisible disabilities, stigma, and student veterans: Contextualizing the transition to higher education. *Journal of Veterans Studies*, *2*(2), 110-120.

Flowers, R. D., Luzynski, C., & Zamani-Gallaher, E. M. (2014). Male transfer student athletes and Schlossberg's transition theory. *Journal for the Study of Sports and Athletes in Education*, *8*(2), 99-120.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: study of emotion and coping during three stages of a college examination. *Journal of personality and social psychology*, *48*(1), 150.

Folkman, S., & Lazarus, R. S. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology*, *54*(3), 466-475.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, *50*(5), 992-1003.

Fredman, S. J., Marshall, A. D., Le, Y., Aronson, K. R., Perkins, D. F., & Hayes, J. A. (2019). Interpersonal relationship quality mediates the association between military-related posttraumatic stress and academic dysfunction among student veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, *11*(4), 415.

Gabriel, K., & Sen, P. (1968). Simultaneous test procedures for one-way ANOVA and MANOVA based on rank scores. Sankhyā: The Indian Journal of Statistics, Series A (1961-2002), 30(3), 303-312. Retrieved from http://www.jstor.org/stable/25041361

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). Educational research: An introduction (8th ed.). Boston: Pearson.

Galman, G. J. (2020). 11. Military transitioning: US Coast Guard Service Member Preparation for Civilian Employment. *Veteran Care and Services: Essays and Case Studies on Practices, Innovations and Challenges*, 45.

Ghosh, A., & Fouad, N. A. (2016). Career transitions of student veterans. *Journal of Career Assessment*, *24*(1), 99-111.

Giampaolo, L. A., & Graham, F. D. (2020). Student Veterans: Does How We Welcome Them Matter?*Journal of College Orientation, Transition, and Retention*, *27*(2).

Goldrick-Rab, S., & Labaree, D. (2021). Policy Dialogue: The Problems and Promises of Higher Education in the United States. *History of Education Quarterly, 61*(3), 341-350. doi:10.1017/heq.2021.27

Gomes, H. S., Farrington, D. P., Maia, Â., & Krohn, M. D. (2019). Measurement bias in self-reports of offending: a systematic review of experiments. *Journal of experimental criminology*, *15*(3), 313-339.

Goodman, J., Schlossberg, N. K., & Anderson, M. L. (1997). *Counseling adults in transition: Linking practice with theory*. Springer Publishing Co.

Goodman, J., Schlossberg, N. K., & Anderson, M. L. (2006). *Counseling adults in transition: Linking practice with theory* (3rd ed.). New York: Springer.

Green, S. B., & Salkind, N. J. (2014). Using SPSS for Windows and Macintosh: Analyzing and understanding data. Pearson Education Inc.

Griffin, K. A., & Gilbert, C. K. (2015). Better transitions for troops: An application of Schlossberg's transition framework to analyses of barriers and institutional support structures for student veterans. *The Journal of Higher Education*, *86*(1), 71-97.

Guay, S., Billette, V., & Marchand, A. (2006). Exploring the links between posttraumatic stress disorder and social support: processes and potential research avenues. Journal of Traumatic Stress, 19(3), 327–338.

Hagerty, B. M., Lynch-Sauer, J., Patusky, K. L., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of psychiatric nursing*, *6*(3), 172-177.

Hewett, R., Liefooghe, A., Visockaite, G., & Roongrerngsuke, S. (2018). Bullying at work: Cognitive appraisal of negative acts, coping, wellbeing, and performance. *Journal of occupational health psychology*, *23*(1), 71.

Hinton, C. E. (2020). "I Just Don't Like to Have My Car Marked": Nuancing Identity Attachments and Belonging in Student Veterans. *Journal of Veterans Studies*, *6*(3).

Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Jama*, *295*(9), 1023-1032.

Hunter-Johnson, Y. (2018). Promoting Veterans in Higher Education: Motivation and Adjustments to Their Learning Environments. *International Research Journal of Curriculum and Pedagogy*. *4*(1), pp. 66-79

Hurtado, S., Carter, D. F., & Spuler, A. (1996). Latino student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in higher education*, *37*(2), 135-157.

Jenner, B. (2019). Student veterans in transition: The impact of peer community. *Journal of the First-Year Experience & Students in Transition*, *31*(1), 69-83.

Jenner, B. M. (2017). Student veterans and the transition to higher education: Integrating existing literatures. *Journal of Veterans Studies*, *2*(2), 26-44.

Jinkerson, J. D. (2016). Defining and assessing moral injury: A syndrome perspective. *Traumatology*, *22*(2), 122.

Johnson, A. M., Rose, K. M., Jr., Elder, G. H., Chambless, L. E., Kaufman, J. S., & Heiss, G. (2010). Military combat and burden of subclinical atherosclerosis in middle aged men: the ARIC study. *Preventive medicine*, *50*(5-6), 277-281.Jones, K. C. (2013). Understanding student veterans in transition. *The Qualitative Report*, *18*(37), 1-14. doi:10.5465/AMLE.2011.59513279.

Johnson, G., & Appel, S. (2020). Military-Connected Students in Higher Education. *Change: The Magazine of Higher Learning*, *52*(1), 30-36.

Jones, K. C. (2017). Understanding transition experiences of combat veterans attending community college. *Community College Journal of Research and Practice*, *41*(2), 107-123.

Kearney, D. J., Simpson, T. L., Malte, C. A., Felleman, B., Martinez, M. E., & Hunt, S. C. (2016). Mindfulness-based stress reduction in addition to usual care is associated with improvements in pain, fatigue, and cognitive failures among veterans with gulf war illness. *The American Journal of Medicine*, *129*(2), 204-214.

Khatun, N. (2021). Applications of normality test in statistical analysis. *Open Journal of Statistics*, *11*(01), 113.

Kinney, A. R., Graham, J. E., & Eakman, A. M. (2020). Supported Education among Student Veterans: Impact on Self-Advocacy Skills and Academic Performance. *Journal of Postsecondary Education and Disability*, *33*(4), 353-363.

Kirchner, M. J. (2015). Supporting student veteran transition to college and academic success. *Adult Learning*, *26*(3), 116-123.

Kirchner, M. J., & Pepper, S. (2020). Student Veteran Engagement in Online Education. *New Directions for Adult and Continuing Education*, *2020*(166), 95-109.

Kline, P. (2000). The *Handbook of Psychological Testing.* Psychology Press.

Knapp, S. (2013). Stepping up: We must do more to help student veterans succeed. *The Presidency*, *5*.

Kowalski, C. M., & Schermer, J. A. (2019). Hardiness, perseverative cognition, anxiety, and health-related outcomes: A case for and against psychological hardiness. *Psychological reports*, *122*(6), 2096-2118.

Kranke, D., Gin, J., Saia, R., Heslin, K., & Dobalian, A. (2016). A qualitative investigation that applies an ecological strengths-based perspective to veterans' experience of reintegration into civilian life. Military Behavioral Health, 4(1), 75-81.

Kucer, P. N. (2018). Effect of clinical supervision on job satisfaction and burnout among school psychologists. Retrieved from ProQuest Dissertations & Theses Global (2001578891).

Lazarevic, B., & Bentz, D. (2021). Student perception of stress in online and face-to-face learning: the exploration of stress determinants. *American Journal of Distance Education*, *35*(1), 2-15.

Lazarus, R. S. (1966). *Psychological stress and the coping process*. McGraw-Hill

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Fifty years of the research and theory of RS Lazarus: An analysis of historical and perennial issues*, 366-388.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Leano, A., Korman, M. B., Goldberg, L., & Ellis, J. (2019). Are we missing PTSD in our patients with cancer? Part I. *Canadian Oncology nursing Journal*, *29*(2), 141.

Lewis, M. L., & King, D. M. (2019). Teaching self-care: The utilization of self-care in social work practicum to prevent compassion fatigue, burnout, and vicarious trauma. *Journal of Human Behavior in the Social Environment*, *29*(1), 96-106.

Lieberman, M. A. (1975). Adaptive processes in late life. In *Life-span developmental psychology* (pp. 135-159). Academic Press.

Lipman-Blumen, J. (1976). A crisis perspective on divorce and role change. *Women into wives: The legal and economic impact of marriage.* Sage. 233-258.

Livingston, W. G., & Bauman, M. C. (2013). Activations, deployments, and returns. *In Hamrick, F., & Rumann, C. (Eds.), Called to serve: A handbook on student veterans and higher education* (pp. 41-68). Jossey-Bass.

Lostutter, T. W., Neighbors, C. R., Simpson, T., & Larimer, M. E. (2020). The relationship of college student and veteran identities to mental health symptoms and alcohol use among veteran and nonveteran students. *Military Behavioral Health*, *8*(1), 33-41.

Lowenthal, M. F., Thurnher, M., & Chiriboga, D. A. (1975). *Four stages of life*. Jossey-Bass.

Lukowiak, K., Orr, M., de Caigny, P., Lukowiak, K. S., Rosenegger, D., Han, J. I., & Dalesman, S. (2010). Ecologically relevant stressors modify long-term memory formation in a model system. *Behavioural brain research*, *214*(1), 18-24.

Main, J., Mobley, C., Brawner, C., Lord, S., & Camacho, M. (2016). Using focus groups to understand military veteran students' pathways in engineering education. In *Proc. of the Am. Soc. for Eng. Educ. Annual Conference*.

Martin, E. M. M., Schwab, K. A., & Malik, S. Z. (2018). Defense and Veterans Brain Injury Center: The First 25 Years. *The Journal of head trauma rehabilitation*, *v33*(2), 73-80.

Martin, P. D., & Daniels, F. M. (2014). Application of Lazarus's Cognitive Transactional Model of stress-appraisal-coping in an undergraduate mental health nursing programme in the Western Cape, South Africa: theory development. *African Journal for Physical Health Education, Recreation and Dance, 20*(Supplement 1), 513-522.

Medley, J., Cheney, A. M., Abraham, T., Grubbs, K., Hunt, J., Lu, L., Fortney, J. C., & Curran, G. M. (2017). The Impact of the Psychological Sequela of Trauma on Veterans Seeking Higher Education. *Journal of Postsecondary Education and Disability*, *30*(1), 83-96.

Mendez, S., Witkowsky, P., Morris, P., Brosseau, J., & Nicholson, H. (2018). Student veteran experiences in a transition seminar course: Exploring the thriving transition cycle. *Journal of Veterans Studies*, *3*(2).

Mentzer, B., Black, E. L., & Spohn, R. T. (2015). An analysis of supports for persistence for the military student population. *Online Learning, 19*(1), 31-47.

Minnis, S., Bondi, S., & Rumann, C. B. (2013). Focused learning environments for student veterans. In F. A. Hamrick & C. B. Rumann (Eds.), *Called to serve: A handbook on student veterans and higher education* (pp. 201-218). Jossey-Bass.

Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of cardiac anaesthesia*, *22*(1), 67.

Morissette, S. B., Ryan-Gonzalez, C., Yufik, T., DeBeer, B. B., Kimbrel, N. A., Sorrells, A. M., & Meyer, E. C. (2021). The effects of posttraumatic stress disorder symptoms on educational functioning in student veterans. *Psychological services*, *18*(1), 124.

Morris, P., Albanesi, H., & Cassidy, S. (2019). Student-veterans' perceptions of barriers, support, and environment at a high-density veteran enrollment campus. *Journal of Veterans Studies*, *4*(2), 180-202.

Multiple Sclerosis Council for Clinical Practice Guidelines. (1998). Fatigue and multiple sclerosis. *Evidence-based management strategies for fatigue in multiple sclerosis. Washington, DC: Paralyzed Veterans of America*.

Nash, W. P., Marino Carper, T. L., Mills, M. A., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the moral injury events scale. *Military medicine*, *178*(6), 646-652.

National Center for Veterans Analysis and Statistics. (2015). Profile of Post-9/11 Veterans: 2015. Retrieved from www.va.gov/vetdata/docs/SpecialReports/Post_911_Veterans_Profile_2015.pdf

National Center for Veterans Analysis and Statistics. (2017). *Women Veterans Report: The Past, Present, and Future of Women Veterans.* Department of Veteran Affairs. https://www.va.gov/vetdata/docs/SpecialReports/Women_Veterans_2015_Final.pdf

National Center for Veterans Analysis and Statistics. (2019). *Profile of Veterans: 2017*. Department of Veteran Affairs. https://www.va.gov/vetdata/docs/SpecialReports/Profile_of_Veterans_2017.pdf

Niv, N., & Bennett, L. (2017). Veterans' mental health in higher education settings: Services and clinician education needs. *Psychiatric Services, 68*(6), 636-639. doi: 10.1176/appi.ps.201600065

Noser, E., Fischer, S., Ruppen, J., & Ehlert, U. (2018). Psychobiological stress in vital exhaustion. Findings from the Men Stress 40+ study. *Journal of psychosomatic research*, *105*, 14-20.

Ogujiuba, K., Agholor, A. I., & Estelle, B. (2021). Are there gender differences in sustainable entrepreneurship indicators amongst SMEs in South Africa? Application of MANOVA. *International Journal of Financial Research*.

Olsen, T., Badger, K., & McCuddy, M. D. (2014). Understanding the student veterans' college experience: an exploratory study. *U.S. Army Medical Department Journal*, 101-108.

Osborne, N. (2014). Veteran ally: Practical strategies for closing the military-civilian gap on campus. *Innovative Higher Education, 39*(3), 247-260. doi:10.1007/s10755-013-9274-z

Osborne, N. J. (2016). From camouflage to classroom: Designing a transition curriculum for new student veterans. *Journal of Postsecondary Education and Disability, 29*(3), 285-292.

Osborne, N. J., Arndt, T., & Coleman, K. (2015). *Life during college: The veteran's guide to success.* College Transition Publishing.

Parker, K., Igielnik, R., Barroso, A., & Cilluffo, A. (2019). The American veteran experience and the post-9/11 generation. *Pew Research Center*.

Parkes, C. M. (1971). Psycho-social transitions: A field for study. *Social Science & Medicine, 5*(2), 101–115. https://doi.org/10.1016/0037-7856(71)90091-6

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of health and social behavior*, 2-21.

Peterson, K., Veazie, S., Bourne, D., & Anderson, J. (2019). Evidence Brief: Traumatic Brain Injury and Dementia.

Phillips, T., & Snodgrass, L. L. (2021). Examining Individualism in College Student Retention Theory and Practice: Transitioning from Student Integration to Institutional Adjustment. *Journal of College Orientation, Transition, and Retention*, *28*(1).

Pietrzak, R. H., Johnson, D. C., Goldstein, M. B., Malley, J. C., & Southwick, S. M. (2009). Psychological resilience and postdeployment social support protect against traumatic stress and depressive symptoms in soldiers returning from Operations Enduring Freedom and Iraqi Freedom. *Depression and Anxiety, 26*(8), 745–751.

Plante, J. (2016). The conflict of commodification of traditional higher education institutions. *Academic Leadership Journal in Student Research*, 4, 1-9.

Protopsaltis, S., & Masiuk, L. (2017). *Protecting students and taxpayers*. https://www.cbpp.org/sites/default/files/atoms/files/12-1-17bud.pdf

Queen, J. P., Quinn, G. P., & Keough, M. J. (2002). *Experimental design and data analysis for biologists*. Cambridge university press.

Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. European Journal of Education Studies. 3(9), 369–387. https://oapub.org/edu/index.php/ejes/index

Radford, A. W. (2009). Military service members and veterans in higher education: What the new GI Bill may mean for postsecondary institutions. American Council on Education. Retrieved from http://www.acenet.edu/newsroom/Documents/Military-Service-Members-and-Veterans-in-HigherEducation.pdf

Reyes, A. T., Bhatta, T. R., Muthukumar, V., & Gangozo, W. J. (2020). Testing the acceptability and initial efficacy of a smartphone-app mindfulness intervention for college student veterans with PTSD. *Archives of psychiatric nursing*, *34*(2), 58-66.

Richardson, N. M., Lamson, A. L., Smith, M., Eagan, S. M., Zvonkovic, A. M., & Jensen, J. (2020). Defining moral injury among military populations: A systematic review. *Journal of Traumatic Stress*, *33*(4), 575-586.

Robertson, H. C., & Eschenauer, R. K. (2020). Student Veteran Perceptions of College-To-Career Transition. College Student Affairs Journal, 38(1), 52-64.

Romero, D. H., Riggs, S. A., & Ruggero, C. (2015). Coping, family social support, and psychological symptoms among student veterans. *Journal of Counseling Psychology*, (2), 242-252.

Rosenheck, R., & Fontana, A. (1994). Utilization of mental health services by minority veterans of the Vietnam era. *The Journal of Nervous and Mental Disease, 182*, 685–691.

Rumann, C. B. (2010). *Student veterans returning to a college and universities: Understanding their transitions*. Iowa State University. https://lib.dr.iastate.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com/&httpsredir=1&article=2661&context=etd

Rumann, C. B., & Hamrick, F. A. (2009). Supporting student veterans in transition. *New Directions for Student Services,* (126), 25-34.

Rumann, C. B., & Hamrick, F. A. (2010). Student veterans in transition: Re-enrolling after war zone deployments. *The Journal of Higher Education, 81*(4), 431-458.

Ryan, S. W., Carlstrom, A. H., Hughey, K. F., & Harris, B. S. (2011). From boots to books: Applying Schlossberg's model to transitioning American veterans. *NACADA Journal, 31*(1), 55-63.

Sansone, V. A., & Tucker Segura, J. S. (2020). Exploring Factors Contributing to College Success among Student Veteran Transfers at a Four-Year University. *The Review of Higher Education 43*(3), 888-916. doi:10.1353/rhe.2020.0011.

Sapolsky, R. M. (2005). The influence of social hierarchy on primate health. *Science*, *308*(5722), 648+.https://link.gale.com/apps/doc/A132354366/BIC?u=vic_liberty&sid=summon&xid=5df569d6

Sayer, N. A., Carlson, K. F., & Frazier, P. A. (2014). Reintegration Challenges in U.S. service members and veterans following combat deployment. *Social Issues and Policy Review, 8*(1), 33-73. DOI: 10.1111/sipr.12001

Schlossberg, N. K. (1981). A model for analyzing human adaptation to transition. *The counseling psychologist, 9*(2), 2-18.

Schlossberg, N. K., Goodman, J., & Anderson, M. L. (2012). *Counseling adults in transition: Linking Schlossberg's Theory with practice in a diverse world*. Springer.

Schlossberg, N. K., & Leibowitz, Z. (1980). Organizational support systems as buffers to job loss. *Journal of Vocational Behavior*, *17*(2), 204-217.

Schlossberg, N. K., Lynch, A. Q., & Chickering, A. W. (1989). *Improving higher education environments for adults.* Jossey-Bass.

Schlossberg, N. K., Waters, E. B., & Goodman, J. (1995). *Counseling adults in transition: Linking practice with theory* (2nd ed.). Springer.

Sejati, A. E., Kasmiati, S., & Ikhsan, F. A. (2019, November). The relationship between learning process interactions and student's learning outcomes in environmental sustainability matter geography-social science education subject. In *IOP Conference Series: Earth and Environmental Science* (Vol. 382, No. 1, p. 012026). IOP Publishing.

Seritan, A. L., & Paterniti, D. A. (2018). Serving Those Who Serve: Exploring Military Medical Students' Perspectives. *Journal of Technology in Behavioral Science*, *3*(2), 80-86.

Shay, J. (2014). Moral injury. Psychoanalytic Psychology, 31, 182–191. https://doi.org/10.1037/a0036090

Sikes, D. L., Duran, M. G., & Armstrong, M. L. (2020). Shared Lessons from Serving Military-Connected Students. *College Student Affairs Journal*, *38*(2), 186-197.

Simon, M. K., & Goes, J. (2013). Ex post facto research.

Smee, D., Buenrostro, S., Garrick, T., Sreenivasan, S., & Weinberger, L. E. (2013). Combat to college: Cognitive fatigue as a challenge in Iraq and Afghanistan war veterans with traumatic brain injury: Pilot study survey results. *Journal of Applied Rehabilitation Counseling*, *44*(4), 25-33.

Smith, T. F., Wilson, D., Jones, D. C., Plett, M., Bates, R. A., & Veilleux, N. M. (2012, June). Investigation of belonging for engineering and science undergraduates by year in school. In *2012 ASEE Annual Conference & Exposition* (pp. 25-858).

Snead, K. M., & McBain, L. (2018). The Higher Education Community: Educating America's Next Great Generation. *In A battle plan for supporting military families* (pp. 145-166). Springer, Cham. https://link.springer.com/chapter/10.1007/978-3-319-68984-5_9

Source, M. O. (2014). *Demographics profile of the military community*. Washington, DC: US Department of Defense, 35.

Spencer, L. G. (2016). Faculty advising and student veterans: Adventures in applying research and training. *Journal of Veterans Studies, 1*(1), 52-71.

Stewart, P. (2016). Making rank: Military-friendly institutions expand their services and programs to recruit and retain veteran and student veterans. *Diverse Issues in Higher Education*, (19), 16.

Tabachnick, B. G., & Fidell, L. S. (1996). Using multivariate statistics. *Harper Collins*.

Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics (5th ed.). Allyn and Bacon.

Taylor, A., Parks, R., & Edwards, A. (2016). Challenges on the front lines: Serving today's student veterans. *College and University, 91*(4), 47-60.

Thomassen, Å. G., Hystad, S. W., Johnsen, B. H., Johnsen, G. E., & Bartone, P. T. (2018). The effect of hardiness on PTSD symptoms: A prospective mediational approach. *Military Psychology*, *30*(2), 142-151.

Tinto, V. (2012). Enhancing student success: Taking the classroom success seriously. *Student Success*, *3*(1), 1.

Towbes, L. C., & Cohen, L. H. (1996). Chronic stress in the lives of college students: Scale development and prospective prediction of distress. *Journal of youth and adolescence*, *25*(2), 199-217.

U.S. Department of Veteran Affairs. (2018). PTSD: National Center for PTSD. https://www.ptsd.va.gov/understand/common/common_veterans.asp

U.S. Department of Veteran Affairs. (2020). *Learn about Student Veterans.* Retrieved from. https://www.mentalhealth.va.gov/student-veteran/learn-about-student-veterans.asp

Vacchi, D., Hammond, S., & Diamond, A. (2017). Conceptual models of student veteran college experiences. *New Directions for Institutional Research, 2016*(171), 23-41.

Vacchi, D. T. (2012). Considering student veterans on the twenty-first-century college campus. *About Campus, 17*(2), 15-21.

Vacchi, D. T. (2018). Understanding Progress Toward Degree Completion for Student Veterans in the Post 9-11 Era: A Focused Life History Narrative.

Vacchi, D. T., & Berger, J. B. (2014). *Student veterans in higher education. In Higher education: Handbook of theory and research* (pp. 93-151). Springer, Dordrecht. doi.org/10.1007/978-94-017-8005-6_3

Van Putte, C. L., Regan, J. L., & Russo, A. (2017). Seeley's anatomy & physiology. McGraw-Hill Education.

VA.org. (2021). What is a Veteran? The Legal Definition. Retrieved from https://va.org/what-is-a-veteran-the-legal-definition/

Walker, B. A., Bramstedt, J., Cleary, K. J., Greer, S. T., & Teague, D. T. (2017). Reintegration and transition following active duty: Identifying the challenges for veterans returning from deployment in Afghanistan and Iraq. *American Journal of Occupational Therapy*, 71199. doi:10.5014/ajot.2017.71S1-PO7016

Warner, R. M. (2021). Applied Statistics I: Basic Bivariate Techniques. Sage Publications

Wenger, J. W., O'Connell, C., & Cottrell, L. (2018). Examination of Recent Deployment Experience Across the Services and Components. Santa Monica, CA: RAND Corporation

Wilczyńska, A., Januszek, M., & Bargiel-Matusiewicz, K. (2015). The need of belonging and sense of belonging versus effectiveness of coping. *Polish Psychological Bulletin*, *46*(1), 72-81.

Winkle-Wagner, R. (2015). Having their lives narrowed down? The state of Black women's college success. Review of Educational Research, 85(2), 171-204.

Wilson, C., Sour, A. J., Miller, L. A., Saygbay-Hallie, M., Miller, C., & Daniels, R. A. (2016). *A standardized tool for measuring military friendliness of colleges and universities.* SAGE Open, 6(2), 1-13. DOI: 10.1177/2158244016644009

Wilson, K. B. (2014). Thank you for your service: military initiatives on college campuses. *New Horizons in Adult Education & Human Resource Development, 26*(3), 54-60. DOI: 10.1002/nha3.20072

Wilson, N. E., & Wright, M. (2017). Writing center tutor corps: A veterans-tutoring-veterans program. *WLN: A Journal of Writing Center Scholarship*, *41*(9-10), 2-10.

Winkle-Wagner, R. (2015). Having their lives narrowed down? The state of Black women's college success. *Review of Educational Research*, *85*(2), 171-204.

Wylie, G. R., & Flashman, L. A. (2017). Understanding the interplay between mild traumatic brain injury and cognitive fatigue: models and treatments. *Concussion*, *2*(4), CNC50.

Young, S. (2017). Veterans' adjustment to college: Construction and validation of a scale. *Journal of Veterans Studies, 2*(2), 13-25.

Young, S. L., & Phillips, G. A. (2019). Veterans' Adjustment to College: A Qualitative Analysis of Large-Scale Survey Data. *College Student Affairs Journal*, *37*(1), 39-53.

Zhang, H., Lang, S., Guo, L., Zhao, Y., Shao, F., & Chen, F. (2014). Comparisons of isomiR patterns and classification performance using the rank-based MANOVA and 10-fold cross-validation. Gene, 569 (1), 21-26. https://doi.org/10.1016/j.gene.2014.11.026

Zhang, L. (2018). Veterans going to college: Evaluating the impact of the Post-9/11 GI Bill on college enrollment. *Educational Evaluation and Policy Analysis*, *40*(1), 82-102.

Zumeta, W., Breneman, D. W., Callan, P. M., & Finney, J. E. (2021). Financing American higher education in the era of globalization. Harvard Education Press.

Appendix A

IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 28, 2022

Cynthia Lawrence

John Bartlett

Re: IRB Exemption - IRB-FY21-22-784 The Difference Between Combat Veterans and Non-Combat Veterans Adjustment to College

Dear Cynthia Lawrence, John Bartlett,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 4. Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if . . . the following criteria is met: (ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the

investigator will not re-identify subjects;

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

Appendix B

Copy of Instruments and Permission to use Instruments and Data

Hi Cynthia,

I would be honored for you to use my scale and to further refine it. Please don't hesitate to reach out if you have any questions or if you need an outside reader for your dissertation.

take care,

Sharon

Sharon L. Young, LCSW, Ph.D.

Associate Professor

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Forwarded Message -----

From: "Sharon Young" <youngs@wcsu.edu>

To: "Cynthia Lawrence" <cld4ever_always@yahoo.com>

Sent: Sun, May 24, 2020 at 3:48 PM

Subject: Re: VAC

Hi Cynthia,

Attached you will find my VAC data and a codebook. Please note the reverse coded items in the codebook when you are calculating the VAC score. You will find that keeping meticulous digital files will always serve you in this line of work! Also attached is the qualitative article we spoke about. Let me know if there is anything else I can help you with.

take care,

Sharon

Sharon L. Young, LCSW, Ph.D.

Associate Professor

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From: Cynthia Lawrence <cld4ever_always@yahoo.com>

Sent: Wednesday, May 20, 2020 3:34 PM

To: Sharon Young <youngs@wcsu.edu>

Subject: VAC

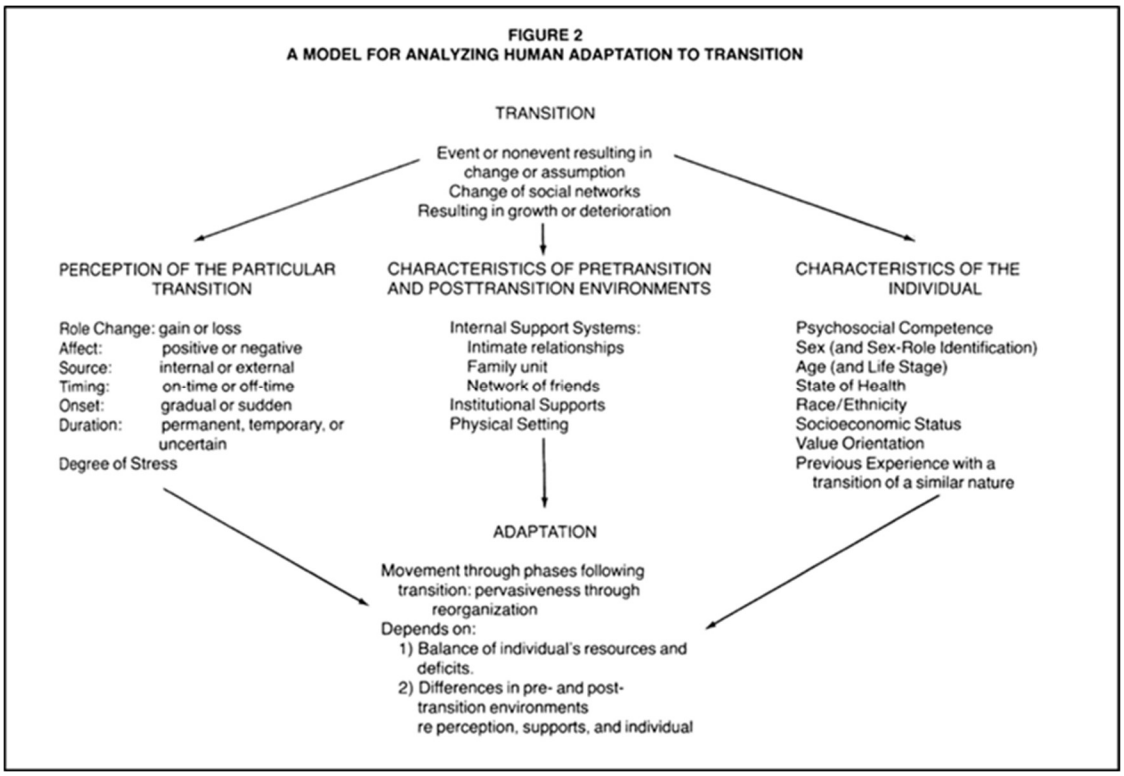
Good Afternoon,

I am having issues collecting data due to COVID-19, with many community colleges closing and my research questions being stress with relation to belonging and social support I worry that COVID-19 could also skew my results. I am 53 shy of enough participants. I have a few questions. Do you still have your raw data from the VAC? If you still have your data could you please share your raw data with me for the intent to: (1) pull a random sample from your data to include with my community college data to meet my population requirements (2) change my research questions to include 2 year colleges and 4 years universities (3) allow for different quantitative analysis of the raw data. Of course all confidentiality will be maintained.

On a side note * I would also willingly share the combined data analysis results, after I defend and if you would like to republish the combined data as an extension of your initial study I would be very much open to that suggestion.

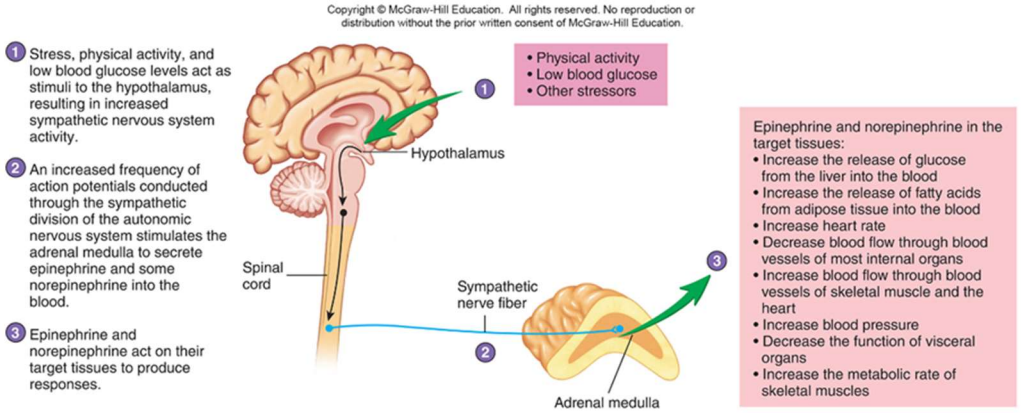
Appendix C

Schlossberg's Transition Model



Appendix D

Stress Response



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Appendix E

Analysis Steps

Analysis Steps

1. Download data (excel spreadsheet of raw data from VAC).
2. Download codebook for VAC for SPSS.
3. Set up SPSS based on codebook (variable view).
4. Filter excel data for combat veteran and veteran.
5. Remove respondents that checked both combat veteran and veteran from participants.
6. Combine respondents combat veteran and veteran onto one spreadsheet.
7. Use random function in excel and grab 200 respondents from data combination.
8. Import data into SPSS data view.
9. Run descriptive statistics.
10. Compare groups.
11. Return to combined groups.
12. Complete assumptions testing.
13. Statistical testing.
14. Analyze and report on results.