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Morgan M. Rittenberger
Cleveland State University

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COLLEGES' AND UNIVERSITIES' REFERRAL OF STUDENT VETERANS
WITH ACQUIRED BRAIN INJURY FOR SPEECH-LANGUAGE SERVICES

MORGAN M. RITTENBERGER

Bachelor of Arts in Speech and Hearing

Bachelor of Arts in Linguistics

Bachelor of Science in Health Sciences

Cleveland State University

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at the

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COLLEGES' AND UNIVERSITIES' REFERRAL OF STUDENT VETERANS
WITH ACQUIRED BRAIN INJURY FOR SPEECH-LANGUAGE SERVICES

MORGAN M. RITTENBERGER

ABSTRACT

The purpose of this study was to identify whether public and private colleges or universities across the United States have procedures to assist student veterans who are facing academic challenges secondary to traumatic brain injury (TBI) or acquired brain injury (ABI). This study aimed to identify whether personnel in college and university veterans services offices, offices of disability services, academic success offices, tutoring centers, or other offices that support student veterans academically are aware of the role of speech-language pathologists in providing treatment to manage the effects of TBI/ABI on academic performance, along with the locations for speech-language pathology services to which their office refers student veterans, and whether their college or university has an on-campus speech-language pathology clinic. Further, this study identified whether such awareness differs based on public or private college or university status, college or university enrollment size, the type of office whose personnel responds to this survey, the employment status of the personnel who respond to this survey, and the region of the United States where the college or university is located.

Results indicated that, as a whole, most public and private college or university personnel do not have awareness of the role of speech-language pathologists, do not have procedures for referrals, and are unaware of whether or

not there is an existing university speech and hearing clinic. If referrals are made, most are to Veteran Affairs (VA) hospitals or facilities. The implications of these results suggest there is a need to boost awareness among campus personnel of the role of speech-language pathologists in treatment to manage the effects of TBI/ABI on academic performance, and to develop campus-wide procedures to refer veterans to on-campus speech and hearing clinics in order to promote accessibility and decrease the complexity of the referral process.

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CHAPTER I

INTRODUCTION

Traumatic Brain Injury in Military Veterans

Traumatic brain injury (TBI) is defined by Johns Hopkins Medicine (2022) as a sudden, external, physical assault that damages the brain. TBI may also be referred to in the literature as acquired brain injury (ABI), described by the Brain Injury Association of America (2022) as an injury to the brain that has occurred after birth, causing changes in the brain's neuronal activity. For the purposes of this paper, both TBI and ABI will be used interchangeably. TBI has remained a major cause of death and disability, with approximately 223,050 TBI-related hospitalizations in 2018 among the general population (Centers for Disease Control and Prevention [CDC], 2022).

Military service members and veterans have been identified as one of multiple groups most likely to be affected by TBI (CDC, 2022), with explosive blasts and combat injuries serving as the most common cause of TBI among active-duty military (Mayo Clinic, 2021). The literature widely supports blast-related TBI among the most frequent injuries sustained by soldiers and personnel who served in recent wars in Iraq and Afghanistan (Nelson et al., 2015). Blast-related

traumatic brain injury (TBI) is caused by a bomb blast, which can cause a full severity range of TBI, from mild concussion to severe, penetrating injury (Rosenfeld et al., 2013). The U.S. Department of Veteran Affairs Office of Research & Development (2022) cited reports of nearly 414,000 TBIs among U.S. service members between 2000 and 2019, with mild TBI being reported as the signature injury resulting from Iraq and Afghanistan conflicts (Turgoose & Murphy, 2018).

The CDC (2022) outlined the severity levels of TBI, which range from mild to severe. Mild TBI (mTBI), also known as a concussion, can produce a variety of physical, cognitive, and social-emotional symptoms that appear and persist at different rates and differ per person. This form of brain injury is caused by a bump, blow, or jolt to the head, as well as a hit to the body that causes the brain to move back and forth. More specifically for veterans, the United States Department of Defense (2021) noted that explosive blast exposures can cause blast-induced TBI, as they generate shock wave energy that impacts brain tissue. This has been the leading cause of combat and training TBIs among service members. The movement of the brain in the skull can produce both chemical changes and stretching and damaging of brain cells.

The high incidence of TBI among military personnel provokes questions about the conditions that stem from injury, along with the influences these conditions have on a service veteran's quality of life and well-being after transitioning out of the service. For example, many veterans are pursuing higher education. According to the Student Veterans of America 2020 Annual Report,

“more than 1 million Americans are currently receiving GI Bill benefits” (p. 4), which provide educational assistance to service members, veterans, and dependents. The National Veteran Education Success Tracker (NVEST) Project is a comprehensive study of the academic success of student veterans using data from research collected by Student Veterans of America. As of 2017, 453,000 veterans have earned degrees and certificates using the Post-9/11 GI Bill, which has been identified as the largest increase in educational support for veterans since the World War II-era GI Bill (Cate et al., 2017). An increase in educational support could contribute to the pursuit of a degree.

Post 9/11 GI Bill

The Post 9/11 GI Bill was implemented on August 1st, 2009, and financially supports veterans and eligible dependents who have served after September 10, 2001, by paying tuition and fees directly to the school in which the individual is enrolled. This includes both graduate and undergraduate degrees, in addition to vocational, flight, or correspondence training, licensing and national testing programs, entrepreneurship training, and tutorial assistance (Office of Public and Intergovernmental Affairs, n.d.). The 2020 Student Veterans of America census survey indicated that student veterans were utilizing the GI Bill more than any other source of financial aid. According to the U.S Census Bureau, Post-9/11 veterans are the youngest veteran group, with a median age of 37, and Post 9/11 and Gulf War veterans have the highest levels of education, with more than 75% of these individuals having some college experience. As of 2018, there were over 3 million Post 9/11 veterans. Thirty-nine percent of the 43% of veterans

with a service-connected disability have a rating of 70% or higher. This accounts for any injury, disease, or disability resulting from service in the armed forces, and this rating has been found to be significantly higher than veterans from other periods of service. The U.S. Department of Veteran Affairs (VA) assigns veterans a disability rating based on conditions connected with military service. This rating is used as a determinant for monthly disability compensation and eligibility for VA benefits (U.S. Department of Veteran Affairs, 2022). These data support the idea that a large number of veterans are pursuing post-secondary education, and it is likely that many student veterans have a service-connected disability that could present challenges when obtaining a degree. The following section will outline the literature regarding challenges student veterans face in higher education.

Challenges Student Veterans Face in Higher Education

A recent review of the literature identified the challenges student service members and veterans (SSM/Vs) face when pursuing higher education, with recommendations to better integrate these students on campus and facilitate academic success. One of the many unique characteristics of SSM/Vs that the review highlighted is the occurrence of combat-acquired TBI. Not only had TBI been identified as possibly interfering with a SSM/V's ability to learn and self-regulate, but the injury also could be accompanied by social and communication deficits that interfere with a student's ability to correspond with faculty on campus. In addition, Bosari and colleagues (2017) stated that student veterans may not be aware of the extent of how TBI interferes with the ability to succeed in the classroom until they are confronted with classroom demands. A study about

the needs and concerns of male combat veterans who have sustained mild traumatic brain injury (mTBI) developed a conceptual model of key domains within the context of mTBI, with noteworthy domains including impairments in cognition, interpersonal interactions, and community reintegration (Daggett et al., 2013). Connecting students with on-campus services could promote retention of these students by providing skills to overcome cognitive and social demands that are influenced by TBI.

Church (2009) explored the impact of returning veterans on college campuses and discussed TBI, post-traumatic stress disorder (PTSD), and mental health injuries as the signature injuries sustained during the Global War on Terrorism (GWOT). TBI, PTSD, and mental health injuries have been described as “invisible injuries,” otherwise known as injuries that cannot be seen by simply looking at a service member, contrasting with other injuries such as burns or limb loss. As a result, invisible injuries may not be realized by personnel at colleges and universities. This, coupled with the fact that many veterans and service members do not disclose such injuries independently, has led to veterans’ lack of utilization of campus service models designed for students with disabilities. As reported by the US Department of Veteran Affairs, 669,922 veterans used VA education and vocational rehabilitation benefits to further their education (VA, 2020). Considering the higher-level cognitive functioning required to succeed in academia, it is likely that veterans returning with mTBI might be affected by persistent symptomatology associated with their injury, but it may not be apparent to others that they have these conditions. The incidence of TBI/ABI in veterans,

an increase in educational support through the Post 9/11 GI bill, and the many challenges student veterans face in higher education supports the need to identify if higher education systems across the United States are prepared to assist student veterans who are facing academic challenges secondary to TBI/ABI.

Purpose of the Present Study

Thus, this study aims to identify whether public and private colleges or universities across the United States have processes to assist student veterans who are facing academic challenges secondary to TBI/ABI. The National Veteran Education Success Tracker (NVEST) reports on the academic success of student veterans who utilize the post-9/11 GI bill and reported a post-secondary academic outcome attrition rate of nearly 30% (Cate et al., 2017). A variety of reasons beyond the scope of this research impact a student veteran's inability to complete a degree but keeping in mind the incidence of TBI in this population and the rate of veterans who utilize the post-9/11 GI bill to pursue an education, it is purposeful to identify if procedures are in place that promote the academic success of student veterans. More specifically, the intent is to answer the following questions:

1. Are personnel in college and university veteran services offices, offices of disability services, academic success offices, tutoring centers, or other offices that support student veterans academically aware of the following:
 - a. the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance

- b. whether their office has an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance
 - c. the locations for speech-language therapy services to which their office refers student veterans who experience the effects of traumatic brain injury or acquired brain injury on academic performance
 - d. whether their college or university has an on-campus speech therapy clinic
2. Does this awareness differ on the basis of the following factors:
- a. public or private college or university
 - b. college or university enrollment size
 - c. the type of office whose personnel responded to this survey
 - d. the region of the United States where the college or university is located

There is nothing in the existing literature that outlines whether or not university personnel are equipped to refer student veterans facing academic challenges to speech-language pathology services in order to manage the effects that TBI/ABI have on academic performance. Considering the high prevalence of TBI in military veterans (Lindquist et al., 2017) and challenges student veterans face when they transition from serving to receiving an education at a postsecondary institution (Bosari et al., 2017), having procedures in place to

connect student veterans with a speech-language pathologist can be one of many ways to promote academic success.

The Role of Speech-Language Pathologists in TBI Evaluation and Treatment

The American Speech-Language-Hearing Association's (ASHA) position statement (American Speech-Language-Hearing Association (ASHA), 1988) describes speech-language pathologists (SLPs) as professionals involved in testing speech, language, and thinking skills who serve a role on the interdisciplinary team of professionals involved in the care of individuals with TBI. SLPs work in a variety of settings, including the Veteran Affairs (VA) hospitals and facilities, civilian hospitals, and both non-university and university speech and hearing clinics. Therefore, these professionals are an accessible provider who can assess and treat cognitive difficulties associated with TBI, while teaching veterans strategies to help compensate for acquired deficits resulting from military service. Identifying whether or not college and university offices have referral procedures for these services can provide information about how student veterans with TBI can be supported in a more meaningful way academically, promoting retention and student success. In a discussion of the interprofessional cognitive rehabilitation team approach for post-concussion cognitive symptoms, Mashima and colleagues (2021) explained that the goal is for the SLP to enable individuals to restore, to the fullest extent possible, their degree of cognitive-communicative functional status as it was prior to their TBI. Establishing the highest level of functioning would give individuals the strategies and supports to resume participation in personal, professional, and community

activities. Further, in a recently published clinical focus article, Mashima et al. (2021) shared goals noted among patients, including returning to work or school, and described how comorbidities associated with TBI can contribute to functional challenges that impact achievement of these goals.

Strategies that the SLP can implement in therapy sessions to promote independence when a student veteran faces cognitive symptomology include coaching, scheduling, alarm clocks, planners, scheduling breaks to prevent fatigue, checklists, memory aids such as audio recorders, supportive phone calls or text messages, adaptive technology, and utilizing global positioning systems (GPS) for driving. Camaraderie established on the battlefield can assist in the transition from military service to higher education and has the potential to enable veteran success (Church, 2009), and student veterans may be more willing to participate in therapy when accompanied by student veteran peers. Forming groups for student veterans with TBI in need of services, especially at universities with on-campus speech and hearing clinics, could not only take advantage of such camaraderie, but could also provide ease in accessibility and a chance for university personnel to better understand veterans' needs. Thirty studies included in a recent systematic review of TBI rehabilitation addressed participants' perceptions of group-based interventions and reported positive participant perceptions, indicating that interventions allowed for opportunities to share experiences and challenges during group-format interventions (ASHA, 2016).

Many colleges and universities across the United States who offer a speech-language pathology master's degree program have an on-campus speech-

language clinic, which serves as a training site for future speech-language pathologists. Typically, services are provided by graduate students supervised by clinical faculty members who hold professional certification from ASHA, and diagnostic and treatment services come with a nominal fee. According to ASHA (n.d.), a physician's order is not required to provide services in the profession of speech-language pathology. A physician's order can be used in the healthcare setting to initiate a referral for speech-language services and may be required by some payers for reimbursement purposes, but if a college or university student support office were to refer a student veteran facing academic challenges secondary to TBI/ABI to a college or university clinic, the student would be able to receive diagnostic or treatment services. For veterans who prefer to receive services at a location other than the VA, an on-campus clinic can be a viable, geographically accessible option.

Once student veterans are connected with speech-language pathology professionals, there is greater potential for referrals to be made to other medical disciplines when student veterans have comorbid diagnoses that affect the ability to make progress in speech and language rehabilitation services. For example, interprofessional practice and the ability to make referrals to other professionals in psychology and psychiatry can facilitate greater support. Church (2009) explained the manifestation of psychiatric disabilities such as PTSD that interfere with cognitive skills, judgments, memory, concentration, organizational skills, and motivation. Compounding problems include difficulty managing assignments and performing multiple tasks with time pressures and task prioritization, as well

as difficulty interacting with others and responding appropriately to social cues (Church, 2009). Increases in severity of cognitive dysfunction can lead to increased depression and anxiety, which both inhibit cognitive success (Hardin & Kelly, 2019). Further, referral to a speech- language pathologist can present an opportunity for other professionals to be welcomed onto the interdisciplinary team. The student veteran will be seen as treated as a whole individual, rather than just for one area of need. To treat the whole individual, it is crucial to know their comprehensive history of student veterans and their specific needs following injury.

CHAPTER II

LITERATURE REVIEW

TBI in the Veteran Population and the Global War on Terror (GWOT)

A recent study that randomly sampled Post-9/11 military veterans (n=1,388) found that 20.3% reported head injury during military service, with 17.3% meeting criteria for TBI. The sample's mean age was 21.6 years (SD=7.1), which corresponds with typical college age. In this study, 87.3% of injuries were mild TBI, with the most common mechanism of injury being a blast or explosion (Lindquist et al., 2017). Another epidemiologic study assessed the prevalence and significance of veterans' self-reported history of combat-related mild TBI (mTBI) after a yearlong deployment to Iraq. This study found that soldiers with mTBI reported significantly higher rates of physical and mental health problems than soldiers with other injuries, with much greater risk for veterans whose injuries were associated with loss of consciousness (Hoge et al., 2008).

Thakur and colleagues (2020) conducted a retrospective cohort study of 1,339,937 military veterans who had received an inpatient diagnosis of PTSD and/or TBI. Results indicated a greater severity level of diagnosed PTSD and/or TBI as evidenced by higher service-connected disability pensions at a younger age in the Post-9/11 group (n=204,083), in comparison to other veteran groups. It is also notable that in this study the average age of veterans adjudicated and

compensated for PTSD and/or TBI pre-9/11 was 66 years, compared with 36 years for Post-9/11 veterans. Therefore, Post-9/11 veterans are not only likely to have a greater severity of injury but are also likely to be younger when they seek compensation for their injuries.

Long-term health outcomes or disability following TBI often include neurologic problems following cognitive disturbance, such as disturbed consciousness, impaired attention, slowed mental processing, working memory problems, memory disturbances, communication impairments, and executive dysfunction (Silver et al., 2009). Specifically, memory, attention, communication, and executive functioning abilities, such as reasoning and problem solving, are crucial skills to employ in the workplace, and are all the more important for veterans engaged in higher education pursuits. Identifying the academic challenges of student veterans will support how to best serve these individuals on campus.

Academic Challenges and Academic Retention of Student Veterans

Transitioning from military service to civilian life can present a variety of challenges for veterans, especially those who intend to include pursuing an education at a post-secondary institution. Bridendolph (2021) used the biopsychosocial model to identify student veteran needs during this transition. Three of the top five services that veterans identified to be beneficial during the transition include (1) assistance with GI bill and Chapter 32¹ benefits, (2) greater

¹ U.S. Department of Veterans Affairs (2022). *Other VA Education Benefits*.

campus resources, such as tutoring and campus events to foster social connections, and (3) having veteran-specific group therapy options.

A recent study conducted at a Midwestern public university interviewed degree-seeking student veterans pertaining to campus development and implementation of a “multiple-pronged, proactive, strength-based approach, encompassing several departments, in order to enhance veterans and service members’ college experience and chances to persist to graduation” (Alschuler & Yarab, 2018, pp. 64). This study highlighted interdepartmental communication between academic advising, disability services, student success, career counseling, and mental health counseling to promote veteran and service member awareness of on- and off-campus services. On-campus veterans groups’ involvement could support academic success.

Blackwell-Starnes (2018, pp. 21) wrote, “programs designed to assist student veterans in developing a sense of belonging on campus are a significant step forward for improving retention; however, student veterans spend the majority of their time in the classroom, thus developing a sense of belonging in the classroom is imperative to their success.” In some cases, age differences and life experience differences between veterans and traditional students might contribute to veteran students’ isolation from peers. A lack of faculty experience with the military and knowledge of military culture may result in faculty being unsure of how to best support student veterans in the classroom. Improving these factors has been identified as imperative to academic success (Blackwell-Starnes, 2018). A disability services office is an on-campus resource that student veterans

who need greater academic support can interact with. TBI as it is a disability category protected by the Americans with Disabilities Act (ADA) and colleges and universities across the United States must comply.

The Americans with Disabilities Act and University Offices of Disability Services

The Americans with Disabilities Act (ADA, 1990) is a federal law prohibiting discrimination against individuals with disabilities. According to the U.S. Department of Justice Civil Rights Division (n.d.), a person with a disability includes someone who has a physical or mental impairment that substantially limits one or more major life activities, where life activities include cognitive functions such as thinking and concentrating, and tasks like working, reading, learning, and communicating. TBI is listed under one of the many disabilities protected by the ADA. Title II and Title III of the ADA outline regulations for publicly-funded universities and privately-funded schools, respectively. Every public or private school receiving federal funding is required to make all postsecondary institution programs accessible to students with disabilities via accommodations and modifications (Americans with Disabilities Act National Network, n.d.).

Shackelford (2009) reported that documenting the needs of student veterans with disabilities can be a daunting task for disability services (DS) providers. Disabilities such as TBI, a prevalent combat-related disability resulting from the use of explosive devices during the Iraq and Afghanistan conflicts, are invisible in comparison to readily apparent physical disabilities. As a result, a

student veteran may choose to not report the hidden disability, which makes it challenging for DS providers to respond to the student's problems effectively and efficiently. It should be noted that student veterans do not do this with the intention of creating frustration among themselves and others. Hesitation toward self-identification is a reason that is related to the hope held by many non-traditional student veterans to blend in with their peers. Self-disclosure may be inhibited by cultural norms developed during military service, where acknowledging, discussing, or reporting a problem may result in negative reactions from military superiors and counterparts. Some disabilities take time to develop, such as PTSD, and are therefore not as easily recognizable to some student veterans and those around them.

A recent systematic review conducted by Kutscher and Tuckwiller (2019) discussed persistence in higher education for students with disabilities. The researchers discussed six studies suggesting that students with disabilities perceive accommodations to be of greatest effectiveness when they match their individual needs. Reasons provided included noting how specific accommodations support students to achieve performance on the more challenging academic tasks. This statement supports forming therapeutic relationships between SLPs and student veterans who face academic challenges due to TBI, since SLPs have clinical expertise in providing evidence-based therapy to address cognitive communication needs. Kutscher and Tuckwiller (2019) found that it is important to ensure that offices where students are likely to be directed to go to arrange for academic accommodations are knowledgeable

about services that will effectively meet students' needs. However, this study also found that participants struggled when they were without guidance about how to find accommodations.

The present study aims to identify whether public and private colleges or universities across the United States have processes to assist student veterans who are facing academic challenges secondary to TBI/ABI that involve referrals to speech-language pathology services. As the Method section of this report will detail, participants will be recruited via email according to a procedure for purposeful sampling of college and university offices that assist veterans. Participants who consent will be prompted to an 8-item survey to identify the college or university office in which they work (i.e., veteran services, disability services, academic success, tutoring services, or other), their knowledge of the role of speech-language pathologists in treatment of TBI/ABI, and their knowledge of and processes for referral of veterans to speech-language pathology services.

Identifying such awareness among college and university personnel or lack thereof can reveal whether these professionals are capable of connecting student veterans in need with appropriate speech-language service providers on- or off-campus. If there is not a procedure in place for referral to speech-language pathology providers and veterans are not receiving services, factors associated with TBI/ABI can have an impact on classroom success and may play a role in compromising student veteran retention and persistence to graduation. Lastly, identifying where student veterans are being referred to for speech-language

services can provide data about accessibility and awareness of on-campus speech and language clinics. A crucial component of connecting veterans with speech-language services is whether they are utilizing campus support services who would be making the referral.

Veterans' Utilization of Campus Support Services

Morris and colleagues (2019) surveyed student veterans to gain information about their perceptions of on-campus support services, such as veterans services and disability services. Campus veterans services was one of the highest rated resources. Consequently, it is imperative that campus veterans services can connect student veterans with resources and providers that can support needs related to disabilities connected to military service. The Morris et al. (2019) study highlighted experiences of students who found difficulty navigating the university disability accommodations process. Some respondents hoped to avoid identifying their disability, and responses showed that the process of knowing when and how to seek accommodations was confusing and complex. In addition, some student veterans, those with TBI included, shared that the greatest challenge was with receiving accommodations, as requests were ignored, supports were unavailable, or university personnel were unhelpful. Challenges utilizing campus support systems are one of many influences on veteran students' success.

Influences on Veteran Students' Success

Previous research sought to capture data on factors that influence students' disclosure of non-apparent disabilities in order to receive classroom

accommodations, and why these students might delay disclosure (Kranke et al., 2013). In this study, non-apparent disabilities were defined by the authors as, “psychiatric disabilities, learning disabilities, difficulties with attention, and hidden medical conditions, among others” (p. 35). Although this study exclusively included students with depression, bipolar disorder, attention deficit hyperactivity disorder (ADHD), PTSD, obsessive-compulsive disorder (OCD), and substance abuse disorders, findings can be considered to have some relationship to the experiences of students with TBI, as TBI is also a non-apparent or invisible injury. Data captured showed that students hoped to avoid special attention related to being treated differently from peers. Students were also concerned that the stigma associated with psychiatric disabilities could compromise professors’ recommendations, and there was no formal policy requiring faculty to participate in disability training to better understand stigmatized diagnoses. Student veterans with TBI might have similar experiences, as previous studies have cited faculty having difficulty with connecting with student veterans in the classroom (Blackwell-Starnes, 2018). Autonomy and independence were also identified as reasons for students to avoid receiving needed accommodations. Further, in an exploratory study geared toward determining student characteristics and the disability services that contribute to the academic success of college students with disabilities, Pingry O’Neill and colleagues (2012) captured noteworthy data that students with physical disabilities are twice as likely to graduate in comparison to students with

cognitive disabilities. These data are meaningful since an impact on cognition is consistent with a diagnosis of TBI.

Qualitative analysis of interview transcripts of student veterans identified deficient academic preparation for college for many veteran students, including poor study habits, along with symptoms of PTSD influencing students' success (DiRamio et al., 2008). Prior to the Post 9/11 GI Bill, variability in the quality of military transition programs, a lack of military educational benefits to attend school full-time, a desire to connect with other student veterans, an uneven quality of services provided by campus veterans offices, and a desire for the student veteran population to be noticed and understood by faculty were a few of the themes identified among transcripts in this study (DiRamio et al., 2008). Informing students about accessing services at discharge from rehabilitation, if applicable, or during college orientation can make it so veterans and service members can transition to colleges and universities with an awareness of available services, if these are needed (Kennedy et al., 2008). With the Post-9/11 GI program, the influx of veterans entering higher education requires higher education faculty to understand the various needs veterans may present with as a student population (Vacchi & Berger, 2014).

Unmet Needs of Student Veterans

Albright and colleagues (2018) used qualitative interviews to conduct a needs assessment project to identify the unmet needs of veterans in southern Alabama. Barriers to transition to college included the lack of structure in civilian life, as indicated by a female veteran who served in Iraq, as evidenced by her

statement, “You live your life day-by-day and then you get thrown out into civilian life and there’s nobody there to tell you what to do. There’s nobody there telling you when to get up, how to cope with your whole life doing a 360” (p. 239). Three key themes concerning postsecondary education included (1) pursuing degrees when civilian jobs on military bases were not offered, a need for combat-related services to enhance student veteran success in the civilian sector, and (3) non-mental health services needed to help veterans in the transition to civilian life.

Kennedy and colleagues (2008) surveyed students about college experiences following TBI, gathering data on self-perceptions of their academic skills and performance. The researchers were particularly interested in whether students thought academic skills and performance were related to the effects of their injury and hypothesized that those who reported more lingering effects of TBI would also report more changes in academic skills and performance. Among the responses obtained, 67.7% (21/31) of students reported a change in academic status following injury, and 81% of these students noted that a change in academic status was negative and related to brain injury disability. Memory impairments and academic difficulty were the most frequently reported deficits, followed by organizational difficulty, problems making decisions, and impaired attention. Greater than 80% of students surveyed had difficulty with academics. Nearly half of respondents (44.8%) had never utilized campus disability services, and 20% were unaware that such services existed. Military culture and warrior ethos are two key factors that could impact utilization of campus support services.

Military Culture and the Warrior Ethos

Air Force Policy Directive (AFPD) 36-20 was published in July of 2019, outlining institutional competencies in the forms of knowledge, skills, and abilities needed for Air Force officer candidates prior to becoming commissioned officers. Institutional competency 4.2., “Embodies Airmen Culture,” includes sub competency 4.2.3, “Warrior Ethos.” Warrior Ethos is defined as, “exhibiting a hardiness of spirit despite physical and mental hardships – moral and physical courage. Continuously hones skills to support the employment of military capabilities. Displays military/executive bearing, self-discipline, and self-control” (U.S. Dept. of the Air Force, 2019, pp. 3). It is important to keep in mind that once values have been established in the military, they may carry over when a service member transitions to civilian life. When pursuing higher education, persistent effects of TBI can impact academic performance. Exhibiting hardiness of spirit despite facing academic hardship might translate to non-disclosure of deficits, and then employing self-discipline through attempting to overcome deficits individually. A recent study (Cogan et al., 2021) involved participants recruited from a concussion care clinic at a military medical facility in California. Participants shared reports of healthcare avoidance during military careers because utilization of health care services was equated with weakness and inability to perform as a leader. Not only this, but commitment to one’s work role or unit and fear of losing a position contributed to not seeking medical care (Cogan et al., 2021). This fear might be equally relevant for veterans who do not want to be seen as weak by seeking academic support. Kranke and colleagues

(2013) shared student concerns that professors' recommendations could be compromised if academic assistance was needed, describing the stigma associated with invisible or non-apparent disabilities. Students feared the stigma associated with invisible injuries would impact a professors' professional recommendation or perceptions of them. One student stated, "I don't want them to think of me differently. If they can see me as a normal student... then that would be an ideal situation" (pp. 43).

Distrust of Nonmilitary Personnel

The transition to higher education, or an environment that equips a student veteran with the freedom to make choices can be a daunting task for those returning from the military, where clear direction, organization, and regulation are prioritized (Flink, 2017). Integrating back into society can be challenging for veterans as the public may not understand what an individual who has served in the military has experienced (Flink, 2017). Alschuler and Yarab (2016) describe help-seeking stigma, citing the literature which explains that, "military culture instills a belief that seeking help is a sign of weakness" (pp.50). Despite these researchers focusing mainly on psychiatric symptoms, seeking diagnostic or treatment services for cognitive communication deficits fall into the help-seeking realm, although these might face less stigmatization than mental health might.

Attitudes about seeking treatment can impact whether veterans are accepting of their combat-related deficits acquired during service. Ashley and Brown (2015) engaged in a pilot study to identify perceptions of help-seeking behavior among combat and non-combat veterans. These authors defined combat

elitism as “the assumption that those with combat status are preferred, desired, and more masculine than non-combat personnel. Veterans seeking mental health support may be impacted by internalized beliefs and attitudes that they are not worthy of services or that others are more (or less) deserving.” (p. 535) The authors found that all veterans in their study were less accepting of non-combat veterans help-seeking behavior, and combat veterans were less accepting of other combat veterans help seeking.

Further, Ashley and Brown (2015) reported that combat veterans without injuries were perceived as more worthy of help-seeking behaviors and services than any other veterans, including injured combat veterans. Stigma related to mental health needs in comparison to physical health needs was discussed, considering gender, cultural, and other assumptions about mental illness and recovery. TBI, in addition to PTSD, depression, anxiety, and substance abuse, were referred to as “invisible injuries” (p. 540) and the reasoning for the negative perceptions of help-seeking behaviors was identified to be related to the obligation to maintain stoicism and the expression of masculinity by combat warriors. Consequently, combat veterans may hold the expectation that non-combat and combat-injured counterparts should maintain these qualities of stoicism and masculinity. Stigma related to “invisible” disabilities has been found to create challenges for veterans transitioning to student life (Flink, 2017).

Service Delivery Considerations

Identifying the most effective service delivery models for assessing and managing TBI in college students has been discussed in the literature. Much focus

has remained on student athletes. Ackley and Brown (2020) performed a literature review to identify SLP service delivery recommendation for college-aged student athletes with TBI. One recommendation included the use of structured programs with assessment, management, and monitoring features where the SLP participates in an interdisciplinary team. The goal would be to focus on the provision of prompt and appropriate symptom management to alleviate difficulties associated with persistent symptomatology. Veterans, similarly, can be provided with the supports for social and academic successes. Athletes and veterans are similar groups, as both belong to a subpopulation of individuals on campus who have lived similar experiences. Further, service delivery recommendations included individualization of intervention programs based on students' personal and contextual factors with an emphasis on self-advocacy. (Ackley & Brown, 2020).

Creating structured programs specifically for student veterans enacted by practitioners who are cognizant of their needs, acknowledge the military culture's emphasis on self-efficacy and would utilize the mutual feelings of camaraderie among student veterans could have the potential to alleviate many difficulties associated with barriers to treatment. A personal factor that impacts prompting the awareness of resources for treatment could be where a student veteran wants to receive services. Interdepartmental communication has been identified as an important factor in promoting awareness of resources, so student veterans can have streamlined access to needed care, whether that is received on or off campus (Alschuler & Yarab, 2016). For those who have already received treatment for

deficits, Kennedy and colleagues (2008) noted that time gaps between rehabilitation and return to college can impact the transition process, and students may not be aware of procedures for being connected with disability services at the college or university they attend. A consideration for campuses might include ensuring that, at orientation, all student veterans are given contact information and an introduction to all campus support services, orienting them to their options if this were something they would seek during their academic experiences.

Considering that veterans are engaging in higher education pursuits with the support of the Post-9/11 GI Bill, along with the many challenges that student veterans with TBI face, it is purposeful to identify whether student support systems across the United States are equipped with the knowledge and resources to make appropriate referrals to speech-language pathology services, including those on-campus.

CHAPTER III

METHODOLOGY

This chapter will outline the research design and methods employed for this study. This study was approved by the Institutional Review Board (IRB) for Human Subjects in Research at Cleveland State University on January 6, 2022, approval number IRB-FY2022-104.

Research Design

This is a quantitative study in which the researcher conducted an online survey that in some ways serves as a needs assessment. According to the World Health Organization (WHO, 2020), a needs assessment is “the collection and analysis of information that relates to the needs of affected populations and will help determine gaps between an agreed standard and the current situation” (pp. 314). A needs assessment seeks to understand “the spectrum of needs and risks, geographical distribution of needs and severity, estimated severity of conditions, and existing capacities and resources” (pp. 315). The investigator chose to conduct a needs assessment for this project as a means to identify whether student support systems across the United States are equipped with the knowledge and resources to make appropriate referrals. Both the university employee and student

would benefit from keeping accessibility in mind when ensuring that procedures to connect student veterans with TBI/ABI supports are in place.

Participants

The researchers designed a purposeful strategy for identifying pools of colleges or universities across the United States to survey. As indicated by the 2020 Student Veterans of America Census Survey (pp. 8), 59% of student veterans reported enrollment at a 4-year public college or university, and 16% reporting enrollment at a private college or university. The first pool of potential colleges or universities was obtained by searching the National Center for Education Statistics College Navigator to locate the largest public and the largest private colleges or universities in each state, and then selecting the two largest public colleges or universities and the two largest private colleges or universities that are first alphabetically. To be included, colleges or universities must be 4-year institutions. Institutions, although 4-year, where students primarily receive associate degrees were excluded. Online degree or distance learning programs, specialty programs (e.g., aeronautical universities) and Ivy League colleges or universities were excluded. The institution must have a veterans services, disability services, academic success office, tutoring services, or other similar office whose email address is posted online to have remained on the distribution list. Other variations of these offices' names that serve the same purposes, being that they might connect student military veterans with support services for academic success, were included. If an institution had no such offices, the institution was excluded, and then the alphabetical search was resumed and the

next institution was identified. The two institution per state pattern was continued until a total of 480 universities were identified. As the process continued, if the number of institutions per state was exhausted, the next state alphabetically was used. The greatest number of participants were recruited from the office of disability services, followed by veterans services and then academic success or tutoring services.

Upon IRB approval, the investigator sent out a blinded mass email to the two public and the two private colleges or universities identified per state. Two emails were sent per institution. The initial email was sent with the recruitment statement included (see Appendix A). The offices contacted per institution included both the veterans services and the disability services at all colleges and universities. For institutions lacking one of these offices, then the survey was sent to the academic success office and/or tutoring services, or another named office that is similar in its purpose. As such, the attempt was to email 400 offices located at 200 institutions. The investigator chose electronic distribution of an online survey, since this allows the opportunity to participate to be offered to a wide variety of prospects. As detailed in the Instrumentation section of this report, low response rate prompted the investigator to identify and email 80 additional offices located at 40 institutions by using the same selection procedure. Two reminder emails were sent at 10-day intervals, extending a reminder to participate to those who hadn't, and a blanket thank you message to those unidentified participants who had (see Appendix D).

All participants were recruited via an email message sent from the principal researcher's university email. The recruiting email is found in Appendix A. Part-time and full-time employees in the offices of veterans services, disability services, academic success, and tutoring services at public and private colleges and universities, including student employees, were included in this study. Participants must reside in the United States. Participants were required to read an informed consent agreement prior to participation in the survey. If the participant continued the survey following this, participation was recorded as informed consent. The informed consent letter is found in Appendix B.

Instrumentation and Procedures

The researcher created an 8-item forced-choice survey intended to identify how college or university offices address the needs of veterans with TBI/ABI. The survey is found in Appendix C and discussed within this section of this report.

Question 1 read, "Do you work for a public or private college or university?" As noted above, in a prior study 59% of student veterans reported enrollment at a 4-year public college or university, and 16% reporting enrollment at a private college or university (Student Veterans of America Census Survey, 2020, pp. 8). Although more student veterans pursued public colleges or universities per this census survey, the current investigator wanted to be able to capture differences in response to the research questions across university types, if applicable. The response choices offered were:

1. public

2. private
3. prefer not to answer

Questions 2 and 4 were in regard to the geographical region and enrollment size of the institutions and were asked to capture a representative sample of the current status of awareness across the entire country. This might reveal the possibility that larger institutions have procedures in place, as they might be more likely to enroll a larger number of student veterans total. Question 2 was, “How many students total are enrolled at your college or university?” The response choices offered were:

1. >5,000
2. 5,000-10,000
3. 10,001-15,000
4. 15,001-20,000
5. 20,001-25,000
6. 25,001-30,000
7. >30,000
8. Prefer not to answer

Question 4 read, “In what region of the United States is your college or university located?” The response choices offered were:

1. Northeast
2. Mid-Atlantic
3. Appalachia
4. Southeast

5. Great Lakes
6. Midwest
7. Great Plains
8. Mountain West
9. Southwest
10. Pacific Northwest
11. Noncontiguous
12. prefer not to answer

Question 3 asked, “What office do you work for at your college or university? The response choices offered were:

1. veterans services
2. office of disability services
3. academic success and/or tutoring services
4. other
5. prefer not to answer

The investigator had prepared a survey question that asked participants to identify their roles at their respective college or university. The response choices were:

1. director
2. faculty
3. staff
4. undergraduate student worker
5. graduate student worker

6. doctoral student worker
7. other
8. prefer not to answer

Unfortunately, due to a Qualtrics publishing error, this question was not shown to participants and the investigator was not aware of the error until data had been received. Therefore, data were not collected for this variable. Future studies could include identifying if participants' awareness variables differ based on the university employee's role and assignment.

Question 5 stated, "Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?" The response choices offered were:

1. yes
2. no
3. unsure
4. prefer not to answer

Question 6 read, "Does your office have an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance?" The response choices offered were:

5. yes
6. no
7. unsure

8. prefer not to answer

Question 7 read, “To what location for speech-language therapy services does your office refer student veterans who experience the effects of traumatic brain injury or acquired brain injury on academic performance?” The response choices offered were:

1. veteran affairs (VA) hospital or facility
2. civilian hospital
3. university speech and hearing clinic
4. non-university speech and hearing clinic
5. other
6. unsure
7. our office does not refer student veterans for speech-language therapy services
8. prefer not to answer

Question 8 asked, “Does your college or university have an on-campus speech therapy clinic?” The response choices offered were:

1. yes
2. no
3. unsure
4. prefer not to answer

Data were collected via the Cleveland State University Qualtrics software account. The survey remained open from February 8, 2022, to March 23, 2022. Participants completed the survey via a link provided to them within the initial

recruitment email (found in Appendix A). The email provided the link to the
Cleveland State University Qualtrics website.

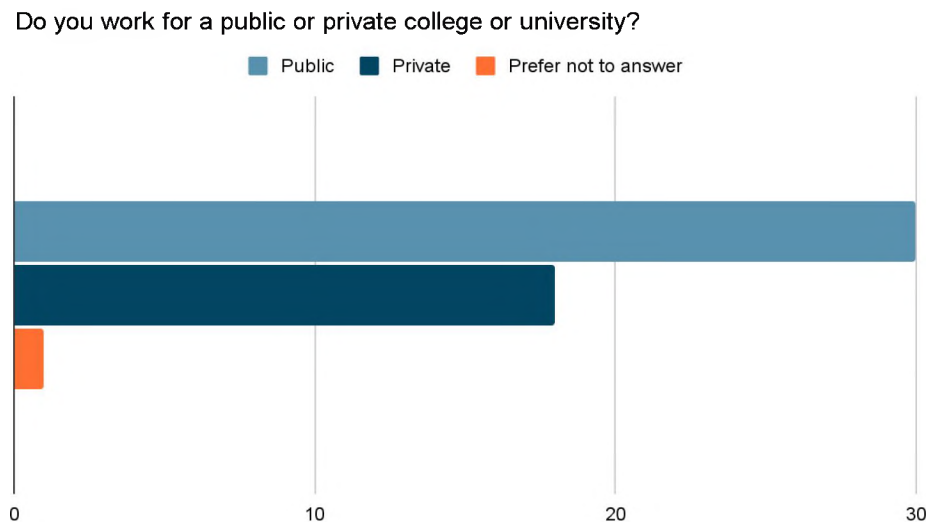
CHAPTER IV

RESULTS

A total of 480 of participants were recruited, and 49 participants responded to the Qualtrics survey. This is a response rate of 10.2%.

Regarding Question 1, which read, “Do you work for a public or private college or university?”, 30 participants responded that they are employed at a public institution, and 19 participants responded they are employed at a private institution. Figure 1 illustrates this response.

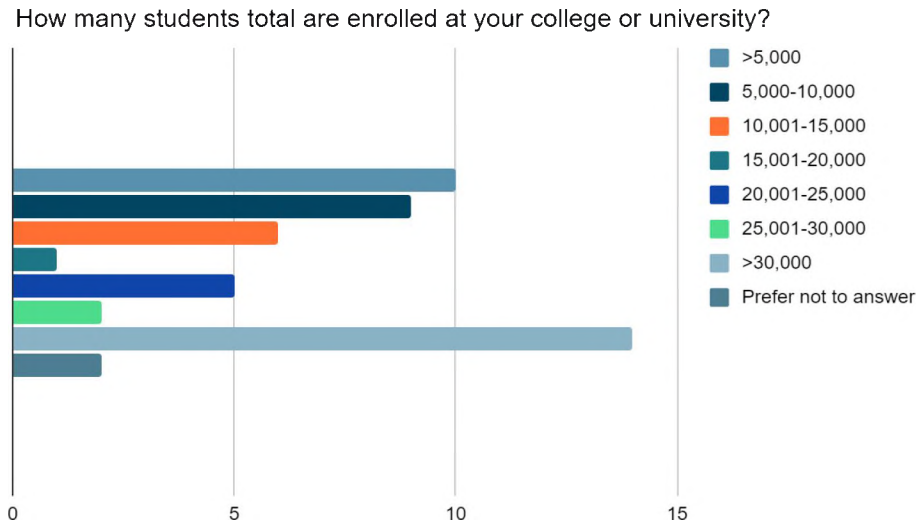
Figure 1. Public or Private Advanced Education



With respect to Question 2, “How many students total are enrolled at your college or university?”, to maintain confidentiality, university names were not recorded. The greatest number, 14 participants, indicated employment at an

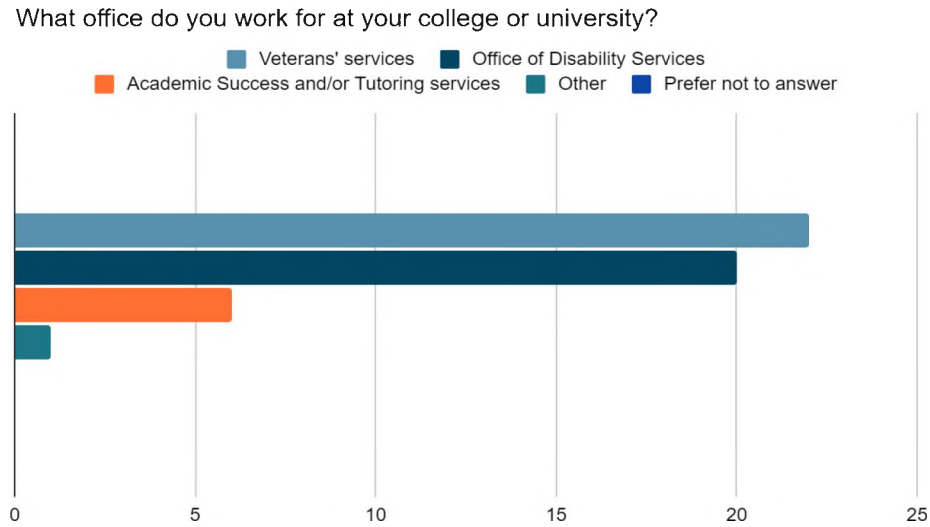
institution with an enrollment size of greater than 30,000 students, with the distribution including all of the enrollment sizes provided. Figure 2 illustrates the enrollment sizes of the participating institutions.

Figure 2. Institutional Enrollment



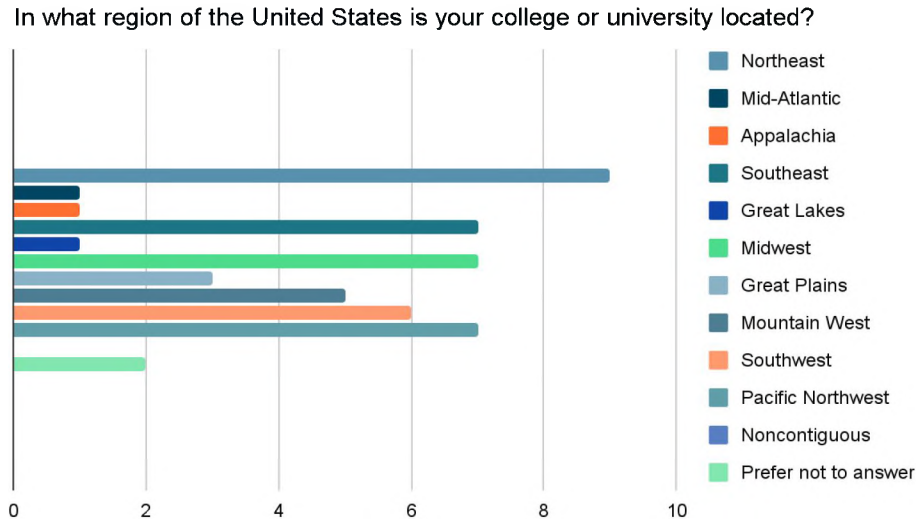
Question 3 asked, “What office do you work for at your college or university?” Twenty-two participants reported working for veterans services, 20 worked in the office of disability services, and six worked in academic success and tutoring. One participant selected “other.” Figure 3 demonstrates this distribution.

Figure 3. On-Campus Employment



The original intention for Question 4 was to ask participants, “What is your role at your college or university?” Unfortunately, due to a survey publication error, this question was not presented to respondents. Therefore, Question 4 read, “In what region of the United States is your college or university located?” In response, a wide geographical range was captured, with all regions represented with the exception of noncontiguous regions (Alaska, Hawaii). Figure 4 illustrates the geographical distribution.

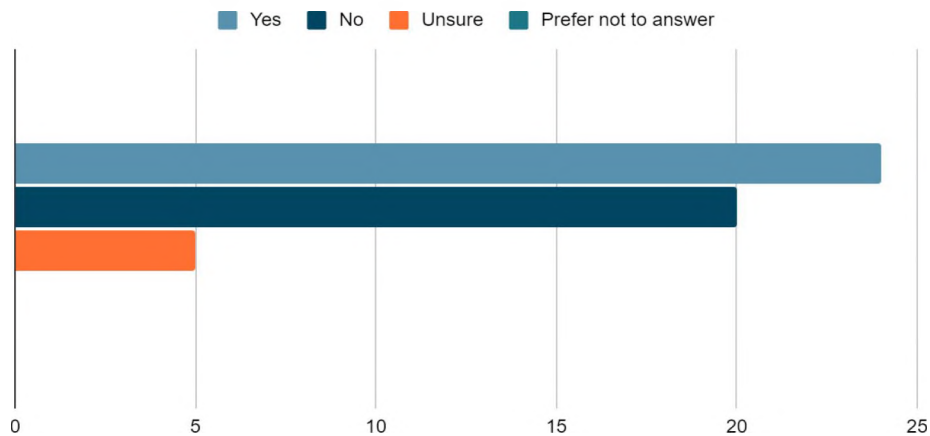
Figure 4. Region of United States



Question 5 stated, “Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?” Results were split, where 24 participants selected yes, they were aware, 20 selected no, indicative of a lack of awareness, and five selected unsure. Figure 5 illustrates these findings.

Figure 5. Speech-Language Therapists Impact on Students with Brain Injury

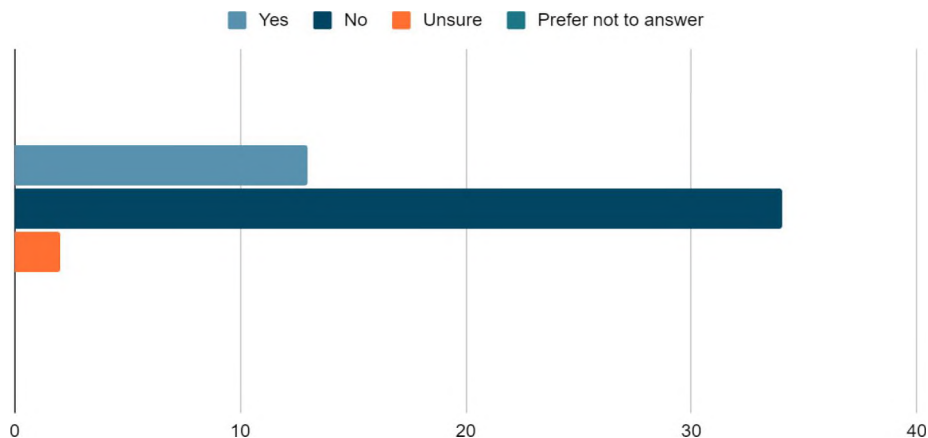
Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?



In response to Question 6, which read, “Does your office have an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance?”, 34 participants indicated that their office does not have an existing procedure to assist veterans in need of speech-language pathology diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance, despite 24 participants indicating awareness of the role of speech-language therapists in providing treatment to manage the effects of TBI/ABI on academic performance (as inquired in Question 5, which read, “Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?” Figure 5 summarizes these findings.

Figure 6. Office Procedures

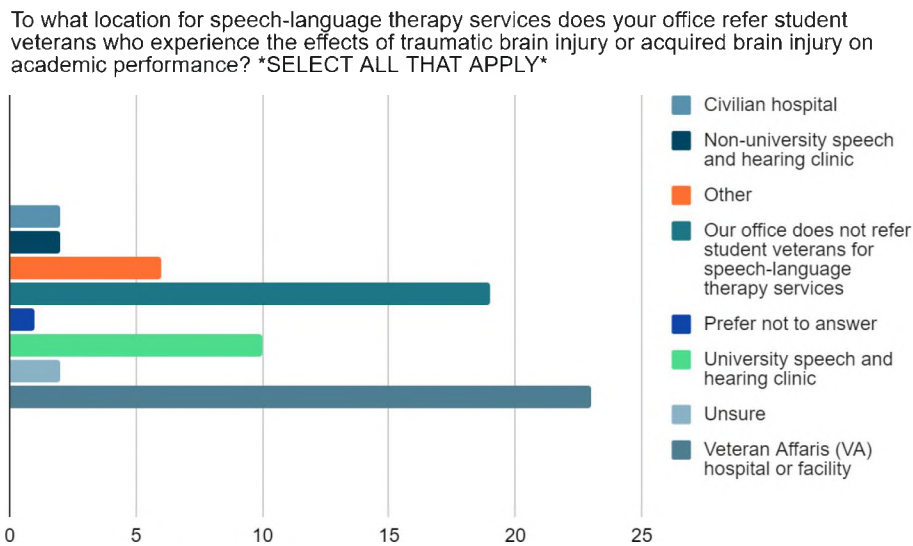
Does your office have an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance?



Question 7, which read “To what location for speech-language therapy services does your office refer student veterans who experience the effects of traumatic brain injury or acquired brain injury on academic performance?”,

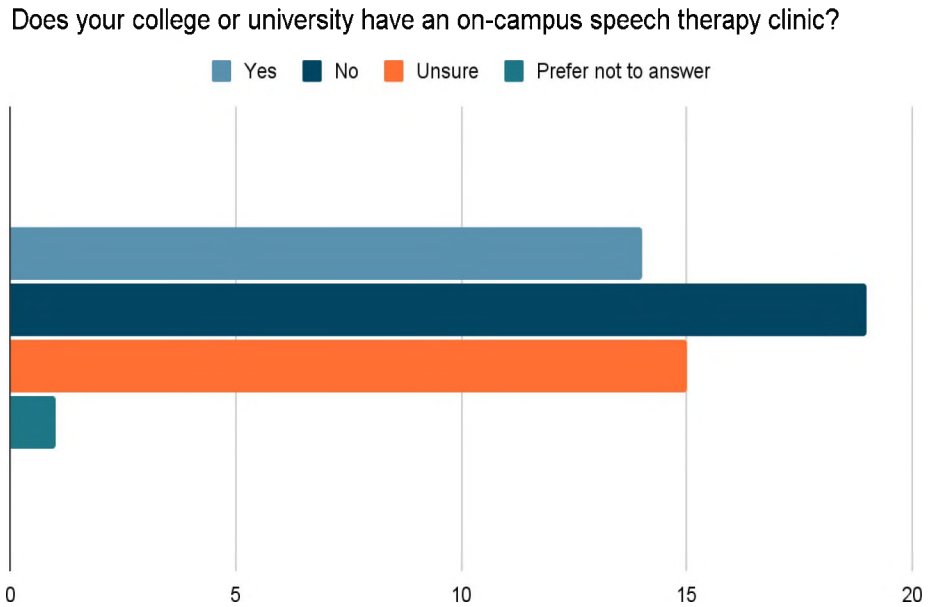
allowed participants to select all areas of referral for speech-language pathology services. Veterans affairs (VA) hospitals or facilities were the most commonly reported location to which offices refer student veterans (n=23, 47%).⁹ participants selected “Our office does not refer student veterans for speech-language therapy services.” Figure 7 illustrates the distribution of referral locations.

Figure 7. Referral Locations



Question 8 asked, “Does your college or university have an on-campus speech therapy clinic?” Interestingly, 15 respondents were unsure whether or not their college or university had an on-campus speech therapy clinic. Fourteen participants reported yes, 19 participants reported no, and one participant preferred to not answer.

Figure 8. University Speech and Hearing Clinic



Summary and Discussion of Findings

The intent of this study was to answer the following questions:

1. Are personnel in college and university veteran services offices, offices of disability services, academic success offices, tutoring centers, or other offices that support student veterans academically aware of the following:
 - a. the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance
 - b. whether their office has an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance

- c. the locations for speech-language therapy services to which their office refers student veterans who experience the effects of traumatic brain injury or acquired brain injury on academic performance
- d. whether their college or university has an on-campus speech therapy clinic

2. Does this awareness differ on the basis of the following factors:

- e. public or private college or university
- f. college or university enrollment size
- g. the type of office whose personnel responded to this survey
- h. the region of the United States where the college or university is located

The following tables represent this study's findings.

Differences in Awareness: Public vs. Private Universities

As shown in Table 1, 16 public institution employees (53%) and nine private institution employees (50%) who responded to this survey lack awareness about the role of speech-language therapists in providing treatment to manage the effects of TBI/ABI on academic performance. These numbers reflect the number of participants who responded "no" or "unsure." A lack of awareness can lead to either an inappropriate referral or no referral for students who would benefit from speech and language services.

Table 1 Public and Private Awareness of the Speech Therapist’s Role

Response	Public	Private	Prefer not to answer
Y	14	9	1
N	12	8	0
US	4	1	0
PNA	0	0	0
Total	30	18	1

(Y=yes; N=no; US=unsure; PNA=prefer not to answer)

As shown in Table 2, 22 public employees (73%) and 14 private employees (78%) who responded to this survey work in an office where they are unsure of an existing procedure, or there is not an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance. This result reinforces that both public and private colleges and universities are potentially unable to refer due to the lack of a procedure to follow or are potentially unable to utilize existing procedures as they are unknown to the employees. As a prior study found, student veterans indicated the complexity of the referral process as a variable in discouraging help-seeking behavior would likely be impacted by this lack of employee preparedness (Morris et al., 2019). It is probable that lacking clear direction on how to make a referral will increase the complexity and delay the time leading up to the start of services.

Table 2 Public and Private Awareness of Procedures

Response	Public	Private	Prefer not to answer
Y	8	4	1
N	20	14	0
US	2	0	0
PNA	0	0	0
Total	30	18	1

Table 3 indicates that both 16 public (53%) and seven private (39%) employee respondents indicated that student veterans who experience the effects of TBI/ABI on academic performance are most often referred to a Veterans Affairs (VA) hospital or facility. Importantly, 13 public institution participants and six private institution participants indicated that the office they work in does not refer student veterans for speech language pathology services at all, which is nearly 39% of the total sample (19 of the total n=49). These data support the need for development of procedures for faculty and staff within the offices of disability services, veterans services, and academic success and tutoring services, so faculty and staff have clear direction as to how to accommodate student veterans who would benefit from speech and language services. It was a positive finding that there were participants from both public and private universities who utilized a university speech and hearing clinic as a referral site, which is a highly accessible location for students on campus.

Table 3 Public and Private Referral Locations

Response	Public	Private	Prefer not to answer
Civilian hospital	2	0	0
Non-university speech and hearing clinic	1	1	0
Other	3	3	0
Our office does not refer student veterans for speech-language therapy services	13	6	0
University speech and hearing clinic	6	3	1
Unsure	0	2	0
VA hospital or facility	16	7	0
Prefer not to answer	0	1	0

Table 4 outlines that 11 public institution respondents (37%) are unsure whether or not the college or university in which they are employed has an on-campus speech and hearing clinic. In contrast, the employees of 15 private colleges or universities (83%) were able to indicate whether or not a campus speech and hearing clinic is available by selecting “yes” or “no.” Perhaps if a procedure was developed to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance, one step of the referral process could include identifying

the existence of a university speech and hearing clinic, or not. If one were to be identified, this could be a primary source for referral.

Table 4 Public and Private On-Campus Speech and Hearing Clinic

Response	Public	Private	Prefer not to answer
Y	10	5	1
N	9	10	0
US	11	3	0
PNA	0	0	0
Total	30	18	1

Differences in Awareness: Enrollment Size

As shown in Table 5, nine respondents employed by a college or university that enrolls >30,000 students (64%) indicated they are not aware of or are unsure of the role of speech-language therapists in providing treatment to manage the effects of TBI/ABI on academic performance. This includes any participant who responded “no” or “unsure” to the question, “Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?” To elaborate, more than half of the respondents at the largest colleges and universities (n=14; respondents with >30,000 enrolled), where there are likely to be more student veterans due to total enrollment sizes, lack this awareness.

Further, 12 representatives of schools with >30,000 students do not have or are unsure of having an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance. Seven of the respondents (50%) with >30,000 students also indicated that their college or university does not refer for speech-language therapy services. If they do refer, it is most likely to a veterans affairs hospital or facility (n=6, 43%). Seven (50%) of respondents from the schools with >30,000 students were unsure of whether their college or university has an on-campus speech therapy clinic. Three out of 14 total respondents from schools with >30,000 students shared that there is an existing speech and hearing clinic on campus, and seven chose the option “unsure.” This means that among the 14 responses there are 10 total possible opportunities (three plus seven) for referral to on-campus speech and hearing clinics, if those seven respondents do in fact have an on-campus facility of which they are unaware. Despite this, only two respondents from this group refer to the university speech and hearing clinic. These data make it clear that referral to accessible campus services has neither been a priority nor an achievement for the large colleges and universities sampled.

Regarding the rest of the sample, results varied about awareness of the role of speech-language therapists in providing treatment to manage the effects of TBI/ABI on academic performance. All participating enrollment sizes produced mixed results, and there was not one region that unanimously could indicate “yes” to indicate all participants from that region are aware of the role of speech-language therapists in providing treatment to manage the effects of TBI/ABI on

academic performance. Colleges and universities with 5,000-10,000 had the greatest awareness, with seven respondents selecting “yes” to this question (78%). In contrast, many other schools had a the same or a greater percentage of participants who selected “no” or “unsure,” including schools with >5,000 students (50%), 10,001-15,000 students (67%), 20,001-25,000 (80%), and >30,000 students (64%). This reveals that across most enrollment sizes, there is a great need for a boost in awareness of and educational opportunities about the role of a speech-language pathologist for college and university faculty and staff who work with student veterans that could possibly present to campus with academic needs related to TBI/ABI.

Table 5 Enrollment Size Awareness of the Speech Therapist’s Role

Response	>5,000	5,000-10,000	10,001-15,000	15,001-20,000	20,001-25,000	25,001-30,000	>30,000	PNA
Y	5	7	2	1	1	2	5	1
N	5	2	4	0	2	0	6	1
US	0	0	0	0	2	0	3	0
PNA	0	0	0	0	0	0	0	0
Total	10	9	6	1	5	2	14	2

Table 6 shows that nearly all enrollment sizes with the exception of 15,001-20,000 and 25,001-30,000 had a greater number of respondents who selected “no” or “unsure” when asked, “Does your office have an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or

treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance?” in comparison to those who selected “yes.” The ratios (no plus unsure: yes) are as follows:

>5,000 9:1

5,000-10,000 5:4

10,001-15,000 4:2

20,001-25,000 4:1

>30,000 12:2

This indicates that all colleges and university enrollment sizes would also benefit from the development of procedures and the lack thereof likely impacts the referral process.

Table 6 Enrollment Size Awareness of Procedures

Response	>5,000	5,000-10,000	10,001-15,000	15,001-20,000	20,001-25,000	25,001-30,000	>30,000	PNA
Y	1	4	2	1	1	1	2	1
N	9	5	4	0	3	1	11	1
US	0	0	0	0	1	0	1	0
PNA	0	0	0	0	0	0	0	0
Total	10	9	6	1	5	2	14	2

As shown in Table 7, with the exception of colleges and universities with 15,001-20,000 and 25,001-30,000, all other enrollment sizes had some participants indicating, “our office does not refer student veterans for speech-

language therapy services.” The largest enrollment size of >30,000 students had the greatest number of participants indicating a lack of referral, followed by referral to a VA hospital or facility. Participants were encouraged to select all possible referral sites, rather than the most commonly used, if applicable.

Table 7 Enrollment Size Referral Locations

Response	>5,000	5,000-10,000	10,001-15,000	15,001-20,000	20,001-25,000	25,001-30,000	>30,000	PN A
Civilian hospital	0	0	1	0	0	0	1	0
Non-university speech and hearing clinic	1	0	0	0	0	1	0	0
Other	1	1	0	1	0	1	2	0
Our office does not refer student veterans for speech-language therapy services	4	2	2	0	3	0	7	1
University speech and hearing clinic	2	3	1	0	0	1	2	1
Unsure	1	1	0	0	0	0	0	0
VA hospital or facility	3	5	4	1	2	2	6	0
Prefer not to answer	1	0	0	0	0	0	0	0

Table 8 shows that many colleges and universities do not have university speech and hearing clinics, but many participants were unsure of whether the college or university in which they are employed has a clinic. Seven participants (50%) reported that they are employed by colleges or universities with >30,000 students and indicated a lack of awareness when asked, “does your college or university have an on-campus speech therapy clinic?” Unfortunately, this means that most large colleges and universities sampled, even if their personnel are aware of the role of speech-language pathologists and have procedures for referral, may not refer to an accessible choice for student veterans who are already on campus.

Table 8 Enrollment Size On-Campus Speech and Hearing Clinic

Response	>5,000	5,000-10,000	10,001-15,000	15,001-20,000	20,001-25,000	25,001-30,000	>30,000	PNA
Y	3	3	0	1	2	1	3	1
N	4	6	3	0	1	0	4	1
US	2	0	3	0	2	1	7	0
PNA	1	0	0	0	0	0	0	0
Total	10	9	6	1	5	2	14	2

Differences in Awareness: Office of Employment

As indicated by Table 9, 15 (68%) of respondents who work for veterans services chose “no” or “unsure” when asked, “Are you aware of the role of speech-language therapists in providing treatment to manage the effects of

traumatic brain injury or acquired brain injury on academic performance?”

Barmak and colleagues (2021) described a university’s veterans resource center as a place where student support systems can collaborate, so students are connected with on and off campus resources. Increasing access to vital services on and off campus is only possible if the role of a speech-language pathologist is known.

Table 9 Office of Employment Awareness of the Speech Therapist’s Role

Response	Veterans Services	Office of Disability Services	Academic Success and/or Tutoring services	Other
Y	7	15	1	1
N	12	4	4	0
US	3	1	1	0
PNA	0	0	0	0
Total	22	20	6	1

Most respondents from offices of disability services (15, 75%) and few (1, 16%) from academic success and/or tutoring services indicated awareness of the role of speech-language therapists in providing treatment to manage the effects of TBI/ABI on academic performance. Considering this awareness, 12 (55%) of veterans services respondents and 5 (83%) of academic success or tutoring services respondents shared that there is no existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance. Despite most respondents from the office of disability services being aware of the role of the

speech-language pathologist (15, 75%), 16 (80%) of respondents employed by this office indicated they are unsure of or there is no existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance, which is shown in Table 10. Thus, the ability to follow through with the referral process could be complex.

Table 10 Office of Employment Awareness of Procedures

Response	Veterans Services	Office of Disability Services	Academic Success and/or Tutoring services	Other
Y	9	4	1	1
N	12	15	5	0
US	1	1	0	0
PNA	0	0	0	0
Total	22	20	6	1

Respondents from veterans services offices shared that a VA hospital or facility is the most commonly used referral source, as shown in Table 11. Despite it being plausible that a variety of referral options would be available, 13 respondents from offices of disability services (65%) do not refer student veterans for speech-language therapy services. Lastly, 10 respondents from veterans services (45%) and 4 respondents from the offices of disability services (20%) weren't aware of whether their college or university has an on-campus speech and hearing clinic.

Table 11 Office of Employment Referral Locations

Response	Veterans Services	Office of Disability Services	Academic Success and/or Tutoring services	Other
Civilian hospital	2	0	0	0
Non-university speech and hearing clinic	0	2	0	0
Other	3	2	1	0
Our office does not refer student veterans for speech-language therapy services	4	13	2	0
University speech and hearing clinic	6	4	0	0
Unsure	0	1	1	0
VA hospital or facility	17	3	2	1
Prefer not to answer	0	0	1	0

Table 12 shows that 10 participants from veterans services (45%), four participants from the office of disability services (20%), and one participant from academic success or tutoring services (16%) who responded to this survey are unaware of whether an on-campus speech therapy clinic exists at their college or university. Not only is awareness lacking across both public and private universities and most enrollment sizes, but across the offices where student veterans are likely to seek out academic support as well.

Table 12 Office of Employment On-Campus Speech and Hearing Clinic

Response	Veterans Services	Office of Disability Services	Academic Success and/or Tutoring services	Other
Y	7	7	0	0
N	5	9	4	1
US	10	4	1	0
PNA	0	0	1	0
Total	22	20	6	1

Differences in Awareness: Geographical Region

A wide range of geographical regions were captured. The greatest number of participants were captured from the Northeast, with nine total responses (18%), followed by the Southeast and Pacific Northwest, with seven total responses respectively (14% each). In response to the question, “Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?” Table 13 reveals that 20 (41%) participants responded “no” and five (10%) participants responded “unsure.”

Table 13 Geographical Region Awareness of the Speech Therapist’s Role

Response	NE	MA	AP	SE	GL	MD	GP	MNW	SW	PW	NC	PNA
Y	5	0	1	4	0	5	2	0	4	2	0	1
N	3	1	0	1	1	2	0	5	2	4	0	1
US	1	0	0	2	0	0	1	0	0	1	0	0
PNA	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	1	1	7	1	7	3	5	6	7	0	2

(NE=Northeast, MA=Mid-Atlantic, AP=Appalachia, SE=Southeast, GL=Great Lakes, MD= Midwest, GP=Great Plains, MNW=Mountain West, SW=Southwest, PW=Pacific Northwest, NC=Noncontiguous, PNA=Prefer not to answer)

Table 14 shows that only 13 participants (27%) out of the total sample indicated “yes” when asked, “Does your office have an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance?” Five responses out of those 13 obtained from the Northeast were “yes.”. It should be noted that in the Midwest, five participants indicated they did not have an existing procedure for referral, and five participants from this region also indicated that their office does not refer student veterans for speech-language therapy services. This supports the possible notion that a lack of procedures within a department may influence whether student veterans are referred for services at all.

Table 14 Geographical Region Awareness of Procedures

Response	NE	MA	AP	SE	GL	MD	GP	MNW	SW	PW	NC	PNA
Y	5	0	1	1	0	2	2	0	1	1	0	0
N	4	1	0	6	1	5	1	5	4	5	0	2
US	0	0	0	0	0	0	0	0	1	1	0	0
PNA	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	1	1	7	1	7	3	5	6	7	0	2

Across all regions in which data were captured, with the exception of the Mid-Atlantic and Great Lakes regions participants who indicated they do not refer whatsoever, veterans affairs hospitals or facilities were most commonly chosen (see Table 15). It should be noted that participants were instructed to select all possible locations for referral.

Table 15 Geographical Region Referral Locations

Response	N E	M A	A P	S E	G L	M D	G P	MN W	S W	P W	N C	PN A
Civilian hospital	0	0	0	0	0	1	0	0	0	1	0	0
Non-university speech and hearing clinic	0	0	0	0	0	1	0	0	1	0	0	0
Other	2	0	1	1	0	0	0	0	2	0	0	0
Our office does not refer student veterans for speech-language therapy services	0	1	0	2	1	5	1	1	2	5	0	1
University speech and hearing clinic	2	0	0	3	0	2	1	1	1	0	0	0
Unsure	2	0	0	0	0	0	0	0	0	0	0	0
VA hospital or facility	7	0	1	3	0	2	1	3	3	2	0	1
Prefer not to answer	0	0	0	1	0	0	0	0	0	0	0	0

As shown in Table 16, seven regions had a percentage of the sample of respondents (64%) who indicated they were unsure as to whether their campus had an on-campus speech and hearing clinic.

Table 16 Geographical Region On-Campus Speech and Hearing Clinic

Response	NE	MA	AP	SE	GL	MD	GP	MNW	SW	PW	NC	PNA
Y	2	0	0	3	0	5	2	0	2	0	0	0
N	5	1	1	1	0	1	1	3	1	4	2	2
US	2	0	0	2	1	1	0	2	3	3	0	0
PNA	2	0	0	2	1	1	0	2	3	3	0	0
Total	9	1	1	7	1	7	3	5	6	7	0	2

Response to Research Questions

The following data provide response to the research questions:

1. Question: Are personnel in college and university veteran services offices, offices of disability services, academic success offices, tutoring centers, or other offices that support student veterans academically aware of the following:

- a. the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance

Response: 24 of 49 respondents (49%) are aware of this role.

- b. whether their office has an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment

services as related to the effects of traumatic brain injury or acquired brain injury on academic performance

Response: 47 of 49 respondents (96%) are aware of whether their office has an existing procedure.

13 of 49 (27%) of respondents indicated that their office has an existing procedure in place.

- c. the locations for speech-language therapy services to which their office refers student veterans who experience the effects of traumatic brain injury or acquired brain injury on academic performance

Response: 27 of 49 respondents (55%) noted locations for speech-language therapy services to which their office refers student veterans.

19 of 49 respondents (39%) noted that their office does not refer student veterans for speech-language therapy services.

1 of 49 respondents (2%) selected “prefer not to answer” and 2 of 49 respondents (4%) selected “unsure.”

- d. whether their college or university has an on-campus speech therapy clinic

Response: 33 of 49 respondents (67%) are aware of whether their college or university has an on-campus speech therapy clinic.

14 of 49 respondents (29%) noted that their college or university does have an on-campus speech therapy clinic.

19 of 49 respondents (39%) noted that their college or university does not have an on-campus speech therapy clinic.

1 of 49 respondents (2%) selected “prefer not to answer.”

2. Does this awareness differ on the basis of the following factors:

- i. public or private college or university
 - a. Response: 14 of 30 respondents (46%) from public colleges or universities are aware of this role
9 of 18 respondents (50%) from private colleges or universities are aware of this role.
 - b. 28 of 30 respondents (93%) from public colleges or universities are aware of whether their office has an existing procedure in place
18 out of 18 respondents (100%) from private colleges or universities are aware of whether their office has an existing procedure in place.
 - c. 28 of 30 respondents (93%) from public colleges or universities noted locations for speech-language therapy services to which their office refers student veterans
15 of 18 respondents (83%) from private colleges or universities noted locations for speech-language therapy services to which their office refers student veterans.
 - d. 19 of 30 respondents (63%) from public colleges or universities are aware of whether their college or university has an on-campus speech therapy clinic

15 of 18 respondents (83%) from private colleges or universities are aware of whether their college or university has an on-campus speech therapy clinic.

j. college or university enrollment size

a. 5 of 10 respondents (50%) from colleges or universities that enroll >5,000 students are aware of this role.

7 of 9 respondents (78%) from colleges or universities that enroll 5,000-10,000 students are aware of this role.

2 of 6 respondents (33%) from colleges or universities that enroll 10,001-15,000 students are aware of this role.

1 of 1 respondents (100%) from colleges or universities that enroll 15,001-20,000 students are aware of this role.

1 of 5 respondents (20%) from colleges or universities that enroll 20,001-25,000 students are aware of this role.

2 of 2 respondents (100%) from colleges or universities that enroll 25,001-30,000 students are aware of this role.

5 of 14 respondents (36%) from colleges or universities that enroll >30,000 students are aware of this role.

1 of 2 respondents (50%) that selected “prefer not to answer” regarding enrollment size are aware of this role.

b. 10 of 10 respondents (100%) from colleges or universities that enroll >5,000 students are aware of whether their office has an existing procedure in place.

9 of 9 respondents (100%) from colleges or universities that enroll 5,000-10,000 students are aware of whether their office has an existing procedure in place.

6 of 6 respondents (100%) from colleges or universities that enroll 10,001-15,000 students are aware of whether their office has an existing procedure in place.

1 of 1 respondent (100%) from colleges or universities that enroll 15,001-20,000 students are aware of whether their office has an existing procedure in place.

4 of 5 respondents (80%) from colleges or universities that enroll 20,001-25,000 students are aware of whether their office has an existing procedure in place.

2 of 2 respondents (100%) from colleges or universities that enroll 25,001-30,000 students are aware of whether their office has an existing procedure in place.

13 of 14 respondents (93%) from colleges or universities that enroll >30,000 students are aware of whether their office has an existing procedure in place.

2 of 2 respondents (100%) that selected “prefer not to answer” regarding enrollment size are aware of whether their office has an existing procedure in place.

- c. 5 of 10 respondents (50%) from colleges or universities that enroll >5,000 students noted locations for speech-language therapy services to which their office refers student veterans.
6 of 9 respondents (67%) from colleges or universities that enroll 5,000-10,000 students noted locations for speech-language therapy services to which their office refers student veterans.
4 of 6 respondents (67%) from colleges or universities that enroll 10,001-15,000 students noted locations for speech-language therapy services to which their office refers student veterans.
1 of 1 respondent (100%) from colleges or universities that enroll 15,001-20,000 students noted locations for speech-language therapy services to which their office refers student veterans.
2 of 5 respondents (40%) from colleges or universities that enroll 20,001-25,000 students noted locations for speech-language therapy services to which their office refers student veterans.
2 of 2 respondents (100%) from colleges or universities that enroll 25,001-30,000 students noted locations for speech-language therapy services to which their office refers student veterans.
7 of 14 respondents (50%) from colleges or universities that enroll >30,000 students noted locations for speech-language therapy services to which their office refers student veterans.

1 of 2 respondents (50%) that selected “prefer not to answer” noted locations for speech-language therapy services to which their office refers student veterans.

- d. 7 of 10 respondents (70%) from colleges or universities that enroll >5,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

9 of 9 respondents (100%) from colleges or universities that enroll 5,000-10,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

3 of 6 respondents (50%) from colleges or universities that enroll 10,001-15,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

1 of 1 respondents (100%) from colleges or universities that enroll 15,001-20,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

3 of 5 respondents (60%) from colleges or universities that enroll 20,001-25,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

1 of 2 respondents (50%) from colleges or universities that enroll 25,001-30,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

7 of 14 respondents (50%) from colleges or universities that enroll >30,000 students are aware of whether their college or university has an on-campus speech therapy clinic.

2 of 2 respondents (100%) that selected “prefer not to answer” are aware of whether their college or university has an on-campus speech therapy clinic.

k. the type of office whose personnel responded to this survey

a. 7 of 22 respondents (32%) from veterans services are aware of this role.

15 of 20 respondents (75%) from the office of disability services are aware of this role.

1 of 6 respondents (17%) from academic success or tutoring services are aware of this role.

1 of 1 respondent (100%) from “other” offices are aware of this role.

b. 21 of 22 respondents (95%) from veterans services are aware of whether their office has an existing procedure.

19 of 20 respondents (95%) from the office of disability services are aware of whether their office has an existing procedure.

6 of 6 respondents (100%) from academic success or tutoring services are aware of whether their office has an existing procedure.

1 of 1 respondent (100%) from “other” offices are aware of whether their office has an existing procedure.

- c. 18 of 22 respondents (82%) from veterans services noted locations for speech-language therapy services to which their office refers student veterans.

7 of 20 respondents (35%) from the office of disability services noted locations for speech-language therapy services to which their office refers student veterans.

3 of 6 respondents (50%) from academic success or tutoring services noted locations for speech-language therapy services to which their office refers student veterans.

1 of 1 respondent (100%) from “other” offices noted locations for speech-language therapy services to which their office refers student veterans.

- d. 12 of 22 respondents (55%) from veterans services are aware of whether their college or university has an on-campus speech therapy clinic.

16 of 20 respondents (80%) from the office of disability services are aware of whether their college or university has an on-campus speech therapy clinic.

4 of 6 respondents (67%) from academic success or tutoring services are aware of whether their college or university has an on-campus speech therapy clinic.

1 of 1 respondent (100%) from “other” offices are aware of whether their college or university has an on-campus speech therapy clinic.

1. the region of the United States where the college or university is located
 - a. 5 of 9 respondents (56%) from the Northeast region are aware of this role.

0 of 1 respondent (0%) from the Mid-Atlantic region are aware of this role.

1 of 1 respondent (100%) from the Appalachian region are aware of this role.

4 of 7 respondents (57%) from the Southeast region are aware of this role.

0 of 1 respondent (0%) from the Great Lakes region are aware of this role.

5 of 7 respondents (71%) from the Midwest region are aware of this role.

2 of 5 respondents (40%) from the Great Plains region are aware of this role.

0 of 5 respondents (0%) from the Mountain West region are aware of this role.

4 of 6 respondents (67%) from the Southwest region are aware of this role.

2 of 7 respondents (29%) from the Pacific Northwest region are aware of this role.

No responses were gleaned from the Noncontiguous region.

This region will no longer be reported below.

1 of 2 respondents (50%) that selected “prefer not to answer” are aware of this role.

b. 9 of 9 respondents (100%) from the Northeast region are aware of whether their office has an existing procedure.

1 of 1 respondent (100%) from the Mid-Atlantic region are aware of whether their office has an existing procedure.

1 of 1 respondent (100%) from the Appalachian region are aware of whether their office has an existing procedure.

7 of 7 respondents (100%) from the Southeast region are aware of whether their office has an existing procedure.

1 of 1 respondent (100%) from the Great Lakes region are aware of whether their office has an existing procedure.

7 of 7 respondents (100%) from the Midwest region are aware of whether their office has an existing procedure.

3 of 3 respondents (100%) from the Great Plains region are aware of whether their office has an existing procedure.

5 of 5 respondents (100%) from the Mountain West region are aware of whether their office has an existing procedure.

5 of 6 respondents (83%) from the Southwest region are aware of whether their office has an existing procedure.

6 of 7 respondents (86%) from the Pacific Northwest region are aware of whether their office has an existing procedure.

2 of 2 respondents (100%) that selected “prefer not to answer” are aware of whether their office has an existing procedure.

c. 7 of 9 respondents (78%) from the Northeast region noted locations for speech-language therapy services to which their office refers student veterans.

0 of 1 respondent (0%) from the Mid-Atlantic region noted locations for speech-language therapy services to which their office refers student veterans.

1 of 1 respondent (100%) from the Appalachian region noted locations for speech-language therapy services to which their office refers student veterans.

5 of 7 respondents (71%) from the Southeast region noted locations for speech-language therapy services to which their office refers student veterans.

0 of 1 respondent (0%) from the Great Lakes region noted locations for speech-language therapy services to which their office refers student veterans.

5 of 7 respondents (71%) from the Midwest region noted locations for speech-language therapy services to which their office refers student veterans.

2 of 3 respondents (67%) from the Great Plains region noted locations for speech-language therapy services to which their office refers student veterans.

4 of 5 respondents (80%) from the Mountain West region noted locations for speech-language therapy services to which their office refers student veterans.

4 of 6 respondents (67%) from the Southwest region noted locations for speech-language therapy services to which their office refers student veterans.

2 of 7 respondents (29%) from the Pacific Northwest region noted locations for speech-language therapy services to which their office refers student veterans.

1 of 2 respondents (50%) that selected “prefer not to answer” noted locations for speech-language therapy services to which their office refers student veterans.

- d. 7 of 9 respondents (78%) from the Northeast region are aware of whether their college or university has an on-campus speech therapy clinic.

1 of 1 respondent (100%) from the Mid-Atlantic region are aware of whether their college or university has an on-campus speech therapy clinic.

1 of 1 respondent (100%) from the Appalachian region are aware of whether their college or university has an on-campus speech therapy clinic.

4 of 7 respondents (57%) from the Southeast region are aware of whether their college or university has an on-campus speech therapy clinic.

0 of 1 respondent (0%) from the Great Lakes region are aware of whether their college or university has an on-campus speech therapy clinic.

6 of 7 respondents (86%) from the Midwest region are aware of whether their college or university has an on-campus speech therapy clinic.

3 of 3 respondents (100%) from the Great Plains region are aware of whether their college or university has an on-campus speech therapy clinic.

3 of 5 respondents (60%) from the Mountain West region are aware of whether their college or university has an on-campus speech therapy clinic.

3 of 6 respondents (50%) from the Southwest region are aware of whether their college or university has an on-campus speech therapy clinic.

4 of 7 respondents (57%) from the Pacific Northwest region are aware of whether their college or university has an on-campus speech therapy clinic.

2 of 2 respondents (100%) that selected “prefer not to answer” are aware of whether their college or university has an on-campus speech therapy clinic.

In summary, the awareness of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance does not differ by public or private college or university status, as awareness was or was near 50% for both. Awareness of this role does differ based on enrollment size (with a range of 20 to 100% awareness), type of office whose personnel responded to this survey (with a range of 17 to 100% awareness), and region of the United States where the college or university is located (with a range of 0 to 100% awareness).

Awareness of whether their office has an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance does not differ greatly between public and private respondents (93% vs. 100% awareness), enrollment size (80 to 100% awareness), or type of office whose personnel responded to this survey (95 to 100%

awareness). A difference was identified based on the region of the United States where the college or university is located (with a range of 0 to 100% awareness).

Awareness of locations for speech-language therapy services to which their office refers student veterans differed based on public or private college or university status (93% vs. 83% awareness), enrollment size (with a range of 40 to 100% awareness), type of office whose personnel responded to this survey (with a range of 35 to 82% awareness) and the region of the United States where the college or university is located (with a range of 0 to 100% awareness).

Awareness of whether their college or university has an on-campus speech therapy clinic differed based on public or private college or university status (63% awareness vs. 83% awareness), enrollment size (with a range of 50 to 100% awareness), type of office whose personnel responded to this survey (with a range of 55 to 100% awareness) and the region of the United States where the college or university is located (with a range of 0 to 100%) awareness.

CHAPTER V

CONCLUSIONS

This study has established the need for a stronger support system for student veterans pursuing post-secondary education who are burdened academically by the effects of TBI/ABI. This could be established by boosting awareness of the role of speech-language therapists. Reflecting upon data captured, when asked the question, “Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?” 20 participants (41%) selected no, and five (11%) selected unsure. 19 participants selected “Our office does not refer student veterans for speech-language therapy services” which might have been affected by a lack of awareness about the role of speech-language therapists, because one cannot refer to speech-language therapy if they don’t know if that would be an appropriate provider. Various locations for speech-language services were provided, but a number of respondents indicated that their college or university does not refer at all (n=19, 39%). Lastly, regardless of type, size, region, or office of employment, college and university personnel would benefit

from knowing whether or not their college or university has an on-campus speech and hearing clinic, as this can serve as a possible location for referral for students interested in an on-campus option.

Previous literature established the impact that the transition to civilian life has on some student veterans in areas including help-seeking behavior (Ashley & Brown, 2015), invisible injuries (Church, 2009), disclosure of deficits (Cogan et al., 2021), and how comorbidities impact achievement of goals. Past research reported that a lack of utilization of disability services to navigate the complex process of seeking accommodations may present a barrier to connecting student veterans with the services they need (Blackwell-Starnes, 2018). For students who choose to utilize disability services and other offices that provide academic support, decreasing the complexity of the referral process could be boosted by making sure college and university employees are equipped with awareness of the role of a speech therapist, whether procedures exist to refer, locations for referral, and whether or not their campus has a speech and hearing clinic to serve as a geographically accessible option for student veterans who would prefer to utilize this location.

Most pertinent results regarding the referral process included:

1. 34 participants (69%) indicated that the institution in which they work does not have existing procedures for referring students to speech therapy in place.
2. Over half of respondents (n=25, 51%) whose job it is to refer veterans for needed services specified a lack of awareness of the

role of speech-language pathologists in providing treatment to manage the effects of TBI/ABI on academic performance.

- a. A lack of both procedures and awareness is evidence that many colleges and universities would be unprepared if a student veteran were to present with academic challenges and a need for specialized, skilled rehabilitative services.
3. 15 (31%) participants were unsure whether their campus has an on-campus speech therapy clinic.
 - a. Institutions with on-campus clinics provide a highly accessible therapy resource because student veterans are able to be referred for services that are within walking distance of dormitories and class buildings. Perhaps a campus-wide informational campaign or training for all faculty and staff about on-campus speech-language pathology support services could boost this awareness.
 - b. Greater awareness may support student veterans' utilization of these services since they are located near where they will be taking their courses.

Limitations

Despite the limitation of the present study being small in scope, the pool of participants established a glimpse of whether support services at public and private colleges and universities across the United States are prepared to refer student veterans to speech-language pathology services. In addition, it is

challenging to directly compare preparedness based on the number of respondents per region and enrollment size, since some areas and sizes had greater participation than others.

Implications

The findings of this study represent the potential need for the establishment of procedures at public and private colleges and universities to assist veterans in need of speech-language pathology diagnostic and/or treatment services as related to the effects of TBI/ABI on academic performance. A wide range of preparedness and awareness was observed among variables, and to have consistency across all colleges and universities across the United States would support student veterans and their academic success regardless of the institution they choose. To elaborate, all student veterans, regardless of disability status, should have strong supports in place, regardless of whether they decide to use them. Fostering an environment at colleges and universities across the United States where student veterans are set up for success is more easily attained by providing information to the professionals in campus support services who play a direct role in their academic success. Without this information, there is risk that student veterans with TBI/ABI will continue to have experiences where receiving supports is complex (Morris et al., 2019), which presents the potential that veterans might avoid much-needed services all together.

Future Research

Future research may explore the types of effective models and procedures that some colleges and universities have in place or may help identify how

veterans would characterize their needs, both with the ultimate goal of developing widely-used referral procedures and a greater awareness of the importance of speech-language services in the rehabilitation of veterans with TBI/ABI who are pursuing higher education. Student veterans who are willing to contribute to establishing a comfortable and supportive process for disclosing their needs to the appropriate campus personnel could possibly help ensure that those who seek academic support are comfortable with each step of the procedure. Although the literature has not discussed a program for student veterans at on-campus speech and hearing clinics, Longtin (2013) discussed using existing systems as a resource, such as on-campus speech and hearing clinics that are already a part of the college infrastructure, particularly for students with autism spectrum disorder. Serving the student veteran population with TBI/ABI would be just another special subpopulation with characteristic needs that are able to be identified and supported by speech-language pathology services. Future studies could examine existing campuses that have an on-campus speech and hearing clinic and explore best practices for clinics to market their services to campus support services. Data from the current study reflect that university speech and hearing clinics are an underutilized resource, as only 10 respondents (20%) indicated this as a place of referral.

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APPENDIX A: RECRUITMENT EMAIL

My name is Morgan Rittenberger (XXXXXXXXX @vikes.csuohio.edu) XXX-XXX-XXXX. I am a graduate student in the Communication Sciences and Disorders program in the School of Health Sciences at Cleveland State University. My master's thesis supervisor is Monica Gordon Pershey, Ed.D., CCC-SLP, Associate Professor (XXXXXXXXXX@csuohio.edu). As a part of my thesis, I am surveying employees of universities across the United States to identify whether student veterans who experience negative academic impact due to the effects of traumatic or acquired brain injury are being referred to speech-language pathologists for diagnostic and/or treatment services.

I am asking that you please consider completing this 9-question survey if you fit the following criteria:

You are public or private university personnel in the veterans services office, disability services office, or academic success or tutoring services offices.

Part-time and full-time employees and student workers may participate.

Participants must reside in the United States.

This survey should take about 10 minutes to complete. The questions are multiple choice. Participation is completely voluntary. You are free to decline to answer any questions and you may withdraw from the study at any time.

There are no direct benefits or risks greater than daily living associated with your participation in this study.

By clicking the link below, you will be taken to a consent form and enter the survey.

If you have any questions or comments or need to alert me to any technical difficulties using the survey response form, please contact me at m.m.rittenberger@vikes.csuohio.edu.

Thank you for your willingness to participate.

https://csufull.qualtrics.com/jfe/form/SV_9mGmuat04nRYJZc

Morgan M. Rittenberger (she/her)
Speech and Hearing Program Graduate Student
Cleveland State University (440) 222- 1122
(XXX)XXX-XXXX
XXXXXXXXX@vikes.csuohio.edu
XXXXXXXXX@gmail.com

APPENDIX B: INFORMED CONSENT

INTRODUCTION

My name is Morgan Rittenberger (XXXXXXX @vikes.csuohio.edu) XXX-XXX-XXXX. I am a graduate student in the Communication Sciences and Disorders program in the School of Health Sciences at Cleveland State University. My master's thesis supervisor is Monica Gordon Pershey, Ed.D., CCC-SLP, Associate Professor (XXXXXXXXXX@csuohio.edu).

Please read this consent form carefully. Participation is voluntary. You may print or save a copy of this form for your records.

PURPOSE

As a part of my thesis, I am surveying employees of universities across the United States. I aim to identify whether student veterans who experience negative academic impact due to the effects of traumatic or acquired brain injury are referred to speech-language pathologists for diagnostic and/or treatment services.

PARTICIPANTS

Please consider completing this 9-question survey if:

You are public or private university personnel in the veterans services office, disability services office, or academic success or tutoring services offices.

You are a part-time or full-time employee or a student worker.

You reside in the United States.

PROCEDURE

The survey is completed online in about 10 minutes. To participate, read this consent form, then click YES to open the survey. All questions are multiple choice. You may skip any questions that you wish. Select "Prefer not to answer." You may stop the survey at any time and withdraw from the study by closing your browser. Your responses are recorded when you click SUBMIT.

CONFIDENTIALITY

Participants will identify:
their universities as public or private
their region within the United States
the university office they represent.

No other identifiers will be collected. Qualtrics will not track your identifying information in any way.

All responses will be reported in the aggregate. No university will be named in any articles or presentations.

BENEFITS

There are no direct benefits for participating in this survey.

RISKS

There are no risks for participation greater than in daily living.

CONSENT STATEMENT

“I understand that if I have any questions about my rights as a research subject, I can contact the Cleveland State University Institutional Review Board (IRB) Office at (216) 687-3630.”

By checking Yes below, I agree that:

I have read this consent form.

I am at least 18 years old.

I voluntarily agree to participate in this study.

Please click one choice below:

I agree to participate

Yes (Survey Opens)

No (Survey Closes)

APPENDIX C: QUALTRICS SURVEY

Informed consent veterans study

Q1. Do you work for a public or private college or university?

Public

Private

Prefer not to answer

Q2. How many students total are enrolled at your college or university?

>5,000

5,000-10,000

10,001-15,000

15,001-20,000

20,001-25,000

25,001-30,000

>30,000

Prefer not to answer

Q3. What office do you work for at your college or university?

Veterans services

Office of Disability Services

Academic Success and/or Tutoring services

Other

Prefer not to answer

Q4. In what region of the United States is your college or university located?

Northeast

Mid-Atlantic

Appalachia

Southeast

Great Lakes

Midwest

Great Plains

Mountain West

Southwest

Pacific Northwest

Noncontiguous (Alaska, Hawaii)

Prefer not to answer

Q5. Are you aware of the role of speech-language therapists in providing treatment to manage the effects of traumatic brain injury or acquired brain injury on academic performance?

- Yes
- No
- Unsure
- Prefer not to answer

Q6. Does your office have an existing procedure to assist veterans in need of speech-language therapy diagnostic and/or treatment services as related to the effects of traumatic brain injury or acquired brain injury on academic performance?

- Yes
- No
- Unsure
- Prefer not to answer

Q7. To what location for speech-language therapy services does your office refer student veterans who experience the effects of traumatic brain injury or acquired brain injury on academic performance? *SELECT ALL THAT APPLY*

- Veteran Affairs (VA) hospital or facility
- Civilian hospital
- University speech and hearing clinic
- Non-university speech and hearing clinic
- Other
- Unsure
- Our office does not refer student veterans for speech-language therapy services
- Prefer not to answer

Q8. Does your college or university have an on-campus speech therapy clinic?

- Yes
- No
- Unsure
- Prefer not to answer

APPENDIX D: REMINDER EMAIL

Hello, about 10 days ago you received an email inviting you to participate in a survey.

If you have responded to the survey, thank you for your participation.

If you have not responded, here's the information on how to participate.

Thank you!

https://csufull.qualtrics.com/jfe/form/SV_9mGmuat04nRYJZc

Kind regards,

Morgan M. Rittenberger (she/her)
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