Assessing Depression, Anxiety, and Stress Differences Based on Athletic Training Student Demographics

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Mental health is becoming a concerning issue across the collegiate population. Mental health status including depression, stress, and anxiety, has negatively impacted individuals in this population. There has been an increase in mental health screening across global population that could be beneficial to use for college students, but there is little research regarding athletic training students. The purpose of this study was to investigate the mental health status of athletic training students as it relates to certain student demographics. A cross-sectional, survey-based design was created to achieve this purpose. Mental health was assessed using the DASS-21 survey that included depression, stress, and anxiety questions. A total of 168 athletic training students in a CAATE-accredited program completed the survey. Of the mental health issues questioned, individuals currently experienced stress (71%), followed by depression (42%) and anxiety (41%). These were determined by a combined rating of 'Almost Always', 'Often', or 'Sometimes'. There were statistical differences of stress outcomes related to gender, level of study, institute region, division classification, and weekly hours. Individuals' satisfaction of clinical setting and preceptor setting had statistical differences for depression. Levels of anxiety showed statistical differences with preferred gender. Future research should continue to investigate the relationship between mental health and student demographics in athletic training student populations. Overall mental health issues are prominent in this population, and it is necessary to continue to screen these individuals to return mental health status to baseline measures.

Table of Contents

List of Tables

List of Figures

1.0 Introduction

According to the World Health Organization (WHO), mental health is defined as a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn and work well, and contribute to their community[1]. The CDC defines mental health as the ability to handle stress, work with others, and make healthy choices. Prior to the COVID-19 pandemic in 2019, 970 million people in the world were living with mental health disorders[1]. Of those 970 million people, an estimated 193 million people had major depressive disorder, and 298 million had anxiety disorders in 2020[1]. Since COVID-19, there has been a 28% increase in individuals who have major depressive disorders and a 36% increase in individuals who developed an anxiety disorder[1]. Of the 970 million people affected, 137 million of those individuals were 20-24 years old and lived with a mental disorder[1]. Globally $3.7 billion US dollars are spent on mental health research worldwide, half of which is basic research that includes screening and prevention[1]. In an article from 2015, Eisenberg stated over $1 million was spent on mental health treatment and prevention[2]. This equates to $1 spent on every $400 in tuition money for the students in college[2]. The student population of 16-24 years old is at a heightened level to develop mental health and well-being problems[3].

The knowledge of mental health literacy is lacking in this age group, creating diminished engagement to seek help.[3] There is an overall information gap when discussing, gathering, reporting, and monitoring mental health[1]. Students with a health science education are more likely to be challenged with mental health problems such as depression, anxiety, and stress[4]. Health science students continuing their education, are expected to achieve high academic excellence, clinical evaluations, and develop interpersonal skills with patients[4]. The workload of these

requirements can affect the mental health of these students which can impact overall physical health, academic failure, and poor self-concepts.

Athletic training students are under the umbrella of health science students. These cohorts are expected to perform at a high level clinically as well as in the classroom. This is seen similarly in medical students, nursing students, physician assistant student, and dental students, who must complete such rigorous education requirements. The mental health challenges in these populations have more current research than athletic training students. The lack of known mental health status for athletic training students can create a feeling that these symptoms are normal, and everyone has them. This is not always the case and there needs to be more education around the mental health status of ATS. Specifically, depression, anxiety, and stress are among the most common mental health concerns in allied health students. This study will examine the overall mental health status of ATS (Athletic Training Student) and the possible associations behind poor mental health.

1.1 Mental Health in the General Population

It is reported that 20% of older adults around the globe suffer from some sort of mental health issue[5]. The amount of cases of mental disorders is on the rise[6]. These disorders include depression, anxiety, stress, and a multitude of other mental health-related issues. These mental health problems are seen as an increasing size of overall disabilities in society[7]. According to Christensen, around one in every two people will experience a mental illness in their lifetime, as shown in a study conducted in 2017 in 35 countries that work with the Organization for Economic Co-Operation and Development (OECD)[8]. For working-age adults, it is seen that one in five has

suffered a mental health issue at any time during their lives[8]. The degree of symptom severity can vary. One person's experience can be completely unique to the next. During a person's lifetime, it is possible to develop some sort of mental health disorder that was not present during their younger years. Though, the age at which mental health disorders are most common is in adolescence or early adulthood[6]. It is a difficult health-related problem to measure because it is subjective on what the patient presents with, and how they describe their symptoms. Some symptoms can include finding it hard to wind down, overreacting to situations, getting agitated, unable to be enthusiastic about anything, and feeling close to panic. These types of feelings and emotions can be normal to some individuals. From a study in the UK of 7.5 million young adults from 16-24 years old, 12% reported some sort of mental health problem[7]. This percentage , could be due to lack of reporting as well[6]. Because of the lack of reporting, the U.S. Department of Health and Human Services, have made the risk and recognition of mental health disorders a public health problem[9]. There have been some studies that link poor physical health with poor mental health, saying it is a mirror image[7,8,10]. In a study by Christensen et al.,[8] there were 108,102 participants of a Danish population completed the Mental Component Summary Scale (MCS-12). The survey examined those with poor mental health were less likely to continue and grow in their educational level, compared to those with good mental health[8]. The socioeconomic position among adults is correlated to mental health. The lack of employment and poor living arrangements may affect a person's mental health, impacting their ability to undertake education which can result in less job opportunities[8]. In a study by D'Angelantonio et al., the researchers sampled 2,190 subjects with a mood or anxiety disorder were treated and given assignment to participate in physical activity[11]. Of the subjects, 44.8% were diagnosed with major depressive disorder, 40.6% bipolar, and 14.6% anxiety disorders[11]. The assignment included a planned and repetitive physical exercise with the purpose to improve overall

health[11]. The study showed that subjects who regularly repeated physical exercise had decreased levels of anxiety and depression[11]. Some studies show that poor mental health may be associated with decreased cognitive function, which overall affect growth[8]. Lifestyle and mental health have a reciprocal relationship, so promoting interventions on mental health problems this can lead to improvements on an individual's lifestyle[9]. It is the first step to self-report or recognize a mental health disorder, but it is difficult to diagnose or follow up with proper care. Declining mental health status is a clear risk for people of all ages. Mental health impacts people in their lives from education, lifestyle, marital status, and employment[8]. Emotional wellbeing changes how you act, feel, and think. This emotional feeling can be correlated to depression, which can decrease ability to function efficiently[12]. Depression can affect anyone depending on different factors including biochemical, genetic, and environmental that can influence the presence depression[12].

1.1.1 Depression

Depression is one of the most prevalent mental health disorders and causes negative emotional status[6]. Depression often induces feelings of sadness or a loss of interest in a subject that was once enjoyed[12]. There are different types of depression; major depression, minor depression, and dysthymia[6]. All of these have slight differences in the diagnosis and treatment, but major depression is the biggest concern. Major depression affects more than 300 million people, around 4.4% of the population in total[11]. The Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) is a handbook used by healthcare professionals that is a guide that contains descriptions, symptoms, and other criterion for mental disorders. According to theDSM-5, major depression is defined as having five symptoms in a two-week period that includes "depressed mood or loss of interest or pleasure, along with significant weight loss or gain

(without dieting) or appetite change, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or inappropriate guilt, diminished ability to think or concentrate or indecisiveness, and recurrent thoughts of death or suicide"[6]. Older adults who encounter depression often experience a decrease in overall function and quality of life diminish[6]. When discussing sex differences, older women are more likely to be diagnosed with depression than older men[6]. This difference is noted to living longer and a higher diagnosis rate due to reporting rates[6]. When people discuss depression, there is a stigma associated to it which in turn decreases the reporting rate from an individual. In this population of elders, they may feel uncomfortable with the psychiatric label that they think stigmatizes them to the mental health disorder[6]. Depression is the largest contributor to disability, and the leading contributor to global burden[6]. When discussing depression, anxiety is usually brought up as well, which is another major mental health concern.

1.1.2 Anxiety

While depression is the leading contributor of disability, as stated anxiety is ranked sixth[11]. Individuals with diagnosed anxiety tend to have recurring intrusive thoughts[13]. The emotions that are assessed with anxiety can include tension and worried thought, there can be physical affects too such as change in blood pressure[13]. There are different types and severities of anxiety. Generalized anxiety disorder (GAD) is the consistency of the symptoms of worrying, anxiety, tension, with symptoms of hypervigilance.[14] The rates of anxiety have increased in health care surveys, showing anxiety disorders in 1.2%-15% of older adults[15]. Anxiety is assessed through self-reported measures [15]. There are 12 anxiety self-reporting measures that are used in older adults[15]. Some of these anxiety scales for elderly patients include Adult Manifest Anxiety Scale –

elderly scale (AMAS-E), Penn State Worry Questionnaire (PSWQ), Geriatric Anxiety Inventory (GAI), and the Geriatric Anxiety Scale (GAS)[15]. Anxiety disorders in elderly populations are unnoticed and untreated compared to younger adults[15].A well-known mental health problem is generalized anxiety disorder (GAD), which is the most frequently diagnosed across all ages[16]. The lifetime occurrence of GAD in American adolescents was three percent[16]. The study by Burnstein et al., conducted face-to-face survey with 10,123 adolescents aged 13 to 18 years old in America[17]. It was found that 6% of adolescents were affected with GAD at some point during their lives[17]. A study that examined 29,709 Iranian children and adolescents by Mohammadi et al.,[16] showed a 2.6% lifetime prevalence of GAD. These numbers correlate with each other and show that GAD is prevalent in other countries as well as America. GAD has been expressed as an economic burden by decreasing overall work productivity depending on the ages[16,18]. Using the US National Comorbidity Survey (NCS) and German National Health Interview and Examination Survey, 69,400 patients have been examined of lifetime prevalence of GAD[18]. A study completed in 2002 by Wittchen et al.,[18] showed at that time that GAD was a significant component in decreased work productivity. As the same with depression, women are more likely to have GAD than their male counterparts[16,18]. Those with anxiety also experience similar symptoms to that of depression, creating a lag in epidemiology of GAD[16]. The symptoms of anxiety can sometimes be hidden, especially in the older population, where they can be mistaken for normal aging processes[15]. Since anxiety is a common emotional condition that is experienced in a lot of the population it should be studied deeply to understand the lasting health effects[15]. Individuals living with GAD may have added stressors to their life that they cannot prevent. Being under this constant stress may have even more negative impacts on overall health, physical and mental.

1.1.3 Stress

Everyone experiences stress whether biological, mental, or physical. Stress is a mind-body phenomenon that impacts both physical and mental wellbeing.[19] Stress has stronger associations to decreased mental and physical health than other factors such as tobacco use and excessive alcohol consumption[20]. Adults and youth children experience high levels of stress that need to be acted on[19]. One out of ten high schoolers report symptoms that can be associated with chronic stress[19]. High-schoolers are going through developmental stages both physically and mentally. In this age group there is a link between stress and physical and mental illness[19].. Stress, whether acute or chronic, can accumulate and have increased risks of psychopathology, for any age groups[19]. Psychopathology is the study of significant causes and processes in the development of mental illness.[21]. If someone is continually experiencing excessive stress, there may be a tendency to shut down and have increased symptomology to their mental health. This shutting down is due to chemical events that weaken the prefrontal cortex of the brain and strengthen other parts of the brain[22]. This acute stress is compromising the areas of higher function, causing the shut down or freeze[22]. Trying to manage this stress at a young age looks to be a good way to achieve positive mental health outcomes of many young minds[19]. The ability to manage stress and act upon it will continue to be tested, especially if young adolescents plan on attending a higher education institution.

1.2 Mental Health in College Students

College can be a time for new experiences and creating new networks, but can be a stressful time for young adults, resulting in increased prevalence of mental health disorders [23]. In college, students take on new classes as well as classes for their major which can be added stress which may make symptoms worse[24]. The age of students in college is typically 18-25 years old, and the occurrence of mental illnesses has increased over the last 10 years in that group[25-27]. Globally, in this population, suicide is the fourth leading cause of death, with more than 700,000 individuals every year[28]. Due to this, students at this age are vulnerable to mental health disorders and negative overall wellbeing[3]. College students may have more perceived mental health issues because of the changing environment which could be difficult for new students. Stress and depressive symptoms have been noted in college students due to geographical changes, academic challenges, as well as financial strain[23]. These untreated mental health issues have negative impacts on social interactions, education, and the economy in the long run[3]. The stigma around mental health is noted as the largest barrier to seeking help[27]. It is hard for these students to open up about their feelings and emotions due to the stigma. In a study by Pompeo-Fargnoli, assessed perceived and personal stigma of 352 college undergraduate students in large universities[27]. The results showed that the perceived stigma was greater than personal stigma, and that both were significantly correlated[27] The stigma negatively impacts mental health and the decreases overall willingness to seek help among these students. College students seem to fail to want to seek help, in turn creating worse mental status[3]. There could be many other reasons for the increase in mental health issues such as future employment pressure, self-esteem, parenting style, and psychological problems[29]. Parenting style can have long term impacts on mental health, some clinical psychologists propose that family upbringings is the root of all psychological symptoms[29]. Students may be pressured by

their relatives to pursue classes the student is not interested in, which can later lead to increased employment pressure. Those in their last year of college must start thinking about their future life endeavors. There is a heightened amount of anxiety that is present in those students who may fear unemployment depending on the competitiveness of the field[30]. Self-esteem plays an important role in the development of social interactions, with low self-esteem can show negative mental health impacts[29]. Even with low reporting numbers, approximately one-third of these students describe mental health problems such as depression, GAD, or suicidal thoughts[31]. In a different study, Gibbons et al., conveyed that higher education students identified work-life balance, stress management, and depression/anxiety as the top concerns[32]. In this population, the two major mental health concerns are depression and anxiety[33].

1.2.1 Depression and Anxiety

Students that attend college and university may be at a higher risk of experiencing depression[34]. While in college students may have academic pressures, exams, lack of sleep, stress, and anxiety which can all play a role in the development of depression[34]. From a 2017 survey by the American College Health Association, around 39% of students had emotions of depression and claimed difficulty to function[35]. The Healthy Minds Study (HMS) examines graduate and undergraduate students from institutions across the United States[36]. HMS was created to provide a detailed mental health and related issues in college student populations[36]. HMS includes a plethora of mental health screenings; depression, anxiety, eating disorders, suicide rates, and loneliness[36]. In a study that was conducted in 2016-2017, of 53,760 students that participated, 31% of them had positive screenings for depression[37]. In same study but the 2022-2023 data report, with 76,406 students participating, 41% of students experienced some form of depression[36]. There

is also an increase in participants who completed the survey and study over the six-year period. Using the same two studies it is also shown there was an increase in anxiety in 2016 to 2022, from 26% to 36% respectively[36,37]. These increases in reports of depression and anxiety could be due to COVID-19, overall increased reporting, or increased knowledge of mental health in this student population. Feelings such as loneliness and a sense of disconnection can be attributed to depression[34]. These feelings may just be associated with the new atmosphere in college or university without individuals realizing it may be depressive symptoms. There is a lack of educational knowledge about mental health for college students, some do not realize that their emotions or feelings warrant a treatment.[38] Some symptoms of depression that are recorded using the DASS-21 survey include not able to experience positive feelings, had nothing to look forward to, and unable to feel enthusiastic. In this population, having these feelings may be associated with other factors like sleep, friendships, and if an individual likes their classes. Students who are experiencing these symptoms may hide the symptoms and not disclose information to a health care provider. This will have negative impacts on the mental health of the student and create unneeded stress that could be managed. Stress can continue to increase with workload and clinical requirements, so finding ways to manage can be beneficial to a college student.

1.2.2 Stress

Students entering college are tasked with new responsibilities the moment they step onto campus, and every subsequent time after that. For students in higher education, there are a lot of stressors that impact everyday life. The main way that stress is perceived in this population is intrapersonal factors, including self-expectations, finding friends, eating patterns, and new responsibilities[39]. This is all added stress on top of the stress of academia, for the students pursuing

a degree. Academic stress can be termed as the student's psychological state resulting from extended social and self-imposed pressure in an institution that depletes the psychological reserves[40]. Academic stress can also include understanding new topics related to class work, increased workload, and frequency of testing[4]. Outside of academic stress students can also experience psychosocial stress and socio-demographic stress[4]. Stress has been shown to have a major impact on academic performance[41,42]. Psychosocial stressors can include achieving their parents' expectations and financial hardships that may take place[4]. Psychosocial stress goes beyond the years of school to examine how stress of finding future job employment can have on these students coming out of school[43]. Other socio-demographic stressors include cultural background, gender, and martial status[4]. Because of this excessive stress, it can lead to other health issues like depression and anxiety[44]. A result in a study by Worku et al., of 384 health science students at Arsi University in Ethiopia, 63.5% of students had moderate levels of perceived stress. This stress can be a contributor to psychological, physical and behavioral problems for these health science students[39]. Worku et al., also found that stress levels decreased in the later years of study[39]. This can show that students are adapting to their environment and may be coping with their stress better in later years of higher education[39].

1.3 Mental Health in Health Science Students

Health science students may include those at the undergraduate and graduate levels. For the undergraduate stage these can include biology, chemistry, public health, biomedical sciences, and exercise physiology. At the graduate and professional levels, these students can include

nursing, dentistry, medicine, physician assistant, physical therapy, and athletic training students. In general, graduate students have shown to already be at a higher risk for mental health issues[45]. In a study conducted by Garcia-Williams et al., 301 graduate students from Emory University were surveyed about their mental health. Approximately 13% of respondents were in an allied health program[45]. The results indicated that the students reported overall mild depression, anxiety and distress[45]. There was no distinction of which graduate school the participant was in so the data was distributed among all students[45]. This study from 2014, exemplifies that mental health disorders among graduate students has been a challenge for nearly a decade[45]. Healthcare education is vital to produce well-trained frontline workers who can obtain high levels of patient care[4]. Due to these rigorous requirements, students in these programs can experience psychological distress[4]. These students show high levels of depression, stress and burnout when compared to non-health science students[46]. Melnyk and colleagues investigated [46]a total of 1,087 students, with an average age of 27.6 years, in Big 10 Conference colleges, were given a PHQ-9, Generalized Anxiety Disorder 2 scale, and Perceived Stress Scale 4, to complete to view overall wellness. The students in health science program reported more stress and depression than nursing and medicine students[46]. The study solely examined nursing and medical students as an individual cohort, and the other health science students included dentistry, optometry, pharmacy, public health, social work, veterinary medicine, as well as other health science professions. Also, in this study the researchers found that the students of health science programs report increased levels of stress, anxiety, and depression compared to the faculty[46]. The overall theme is that both faculty and students reported inadequate healthy lifestyle behaviors and increased levels of stress[46]. Fauzi et al,[4] completed a study that examined mental health of 449 undergraduate health science students in Malaysia using the DASS-21 scale. The students examined were 21.86 ($\pm$1.76) years of age and showed that anxiety (85.1%)

was the most abundant psychological distress, followed by stress (65%), and depression (51.5%)[4]. This shows that over half of all the students that completed this survey had a mental health issue to some degree. The students with stress (76%) and depression (66.2%), were categorized as normal-to-mild levels, whereas 74.6% of students with anxiety were categorized as moderate-to-extremely severe anxiety[4]. These two studies express that mental health is very prevalent in students, and these students vary in age to some capacity, but still show signs of mental health illness.

In some cases, the stigma associated with mental health is a reason mental health goes without recognition. Stigma is the negative connotation that is associated with a particular circumstance or quality. The stigma associated with mental health can occur in two ways, perceived from others or personal stigma towards oneself[47]. In a study by Knipe et al,[48] a total of 1,159 students were included 51% medical, 29% veterinarian, and 20% dental were studied using a survey[48]. There were multiple surveys used Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder Assessment (GAD-7), Alcohol Use Disorders Identification Test (AUDIT), Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) to assess depression, anxiety, alcohol disorder, and well-being respectively.[48] Of all the students (70%) of them reported decreased well-being scores.[48]. Since there is a stigma associated with mental health disorders, a main concern is not seeking help or recognition. Students tend to think that what they are feeling may be normal. In the study by Knipe et al.,[48] students with severe depressive symptoms did not seek help due to fear of the documentation (50%), lack of time (46%), fear of unwanted intervention (46%), and few students (17%) did not know where to go for help. The step of recognizing a mental health problem and reporting it is vital in decreasing mental health problems, as there will be more research conducted due to more reporting by any group of people. Figuring out who to go to for

the best resources will help eliminate the stigma associated with mental health and provide positive awareness to mental health. The avoidance of seeking help is misconstrued as a weakness for students, and inevitably can affect career performance[49].

1.4 Mental Health in Athletic Training Students

Athletic training students (ATSs) are tasked with completing hours of clinical experience as well as didactic learning and assessments. This can create a large amount of stress, depressive, and anxiety symptomology due to the demand on these students pursuing this profession[23]. Heightened levels of stress is common in health science students, including ATSs, but there are ways to efficiently ways to manage it[50]. The heightened stress is from academic and clinical work that is mandatory among the Commission on Accreditation of Athletic Training Education (CAATE) accredited professional programs[50]. There are various ways that ATSs can cope from stress in a healthy manner. Engaging with social support, physical outlets, and time management are among healthy coping strategies that ATSs have used to relieve unwanted stress[50]. From a study conducted in 2018 by Crutcher et al., perceived stress was present at a moderate level or worse in 79.9% of ATS, from 9 CAATE-accredited athletic training programs throughout the United States[23]. Using the Perceived Stress Scale (PSS), this study used a 14 question screening, using a Likert scale. Investigators used the Center for Epidemiologic Study Depression Scores (CES-D), to survey depression in ATSs. There were 73 students, or one third of them, that scored above the clinical cut off of 16[23]. The CES-D scale that uses a 4 point Likert scale to assess depressive symptomology[23]. When examining depression using CES-D, there is a maximum score

of 60 and a clinical cut off at 16, scores closer to 60 indicate greater severity of depression[23]. The study did not find any significant differences between men and women on the PSS or CES-D[23]. The year of study in the program also did not have any significant impact on PSS or CES-D scores[23]. Depending on what year a student is in the program, can determine the amount of clinical work that is required. The lifestyle of an athletic training student can be hectic at times and require the ability to adapt quickly to unprecedented situations. When an ATS begins a clinical rotation, it is expected that they are prepared to act on any life-threatening condition that may occur, under the supervision of a clinical preceptor. The first step is educating the athletes to try to prevent an injury from occurring, recognizing if an emergent situation may be occurring, and enacting the emergency action plan for the specific site when necessary[51]. For a student who is going to clinical for the first time, this can be a weighted task that takes practice and confidence to perform in a calm manner. ATSs reports higher levels of depersonalization and emotional exhaustion because of the increased workload and education demands of the professional programs[23]. In order to regain the ATS personality, it is suggested that the student should create a social support with whom they feel comfortable discussing possible mental health concerns[23]. Being an ATS can be hard at times with clinical requirements as well as class work. Being able to manage these tasks and still have a social life while in college may create more mental health problems in these individuals. As we see in other allied health students, mental health is a vital aspect that impacts physical health, decision making, and cognitive function. An ATS endures close to the same clinical requirements as these allied health students, who have known mental health problems. There is a lack of research looking exclusively at ATS and what may be impacting their mental health problems. There may be factors such as clinical hours worked, satisfaction of clinical placement, and location of clinical placement that may be associated with mental health.

1.5 Problem Statement

Recognition and identification of mental health disorders have posed problems for allied health professionals. Depression, anxiety, and stress have been addressed as mental health concerns in this population. These diagnoses have adverse effects on emotional and physical wellbeing. Allied health professionals are an all-inclusive population, which studies have examined the mental health status in these subjects. However, athletic training students appear to be underrepresented in the literature with similar course work and clinical rotations. In athletic training students' mental health disorders warrant necessary research related to the current status of their mental health.

1.6 Study Purpose

The purpose of this study is to investigate the current mental health status of athletic training students currently enrolled in a CAATE-accredited professional program. Using the DASS-21 survey, depression, anxiety, and stress will be investigated in this population. Additionally, this study will help to determine any associations between student demographic and mental health problems.

1.7 Specific Aims

Specific Aim 1: To investigate depression, anxiety, and stress in athletic training students currently enrolled in a CAATE-accredited professional program.

Specific Aim 2: To identify associations between student demographic and mental health symptoms.

1.8 Study Significance

Mental health problems are a concern among undergraduate and graduate students who are working to complete higher education courses. Health science students, including athletic training students, who complete clinical experience as well as didactic learning, may experience more mental health problems. This study will gather information to investigate the current state of mental health in professional athletic training students. Results of this study may benefit students as well as faculty to establish guidelines regarding mental health status of their students. The student demographics will be assessed for associations with reported mental health problems.

2.0 Methods

2.1 Experimental Design

This study utilized a survey-based cross-sectional study design to investigate the current mental health status of athletic training students currently enrolled in a CAATE-accredited professional program. An online survey was sent to athletic training students. The survey consists of 2 sections, a demographic section as well as the DASS-21 survey to assess the specific aims. This survey took 5-10 minutes and was accessible by computer or mobile device.

2.2 Subject Recruitment

Subjects were recruited through the National Athletic Trainers' Association (NATA) Research Survey Service. The Research Survey Service provided access to 1,000 survey participants. Participants were non-credentialed athletic training student members. Participants were requested by member type as non-credentialed NATA student members. Participation in the survey was optional and participants were able to withdrawal from the study at any time.

2.3 Subject Characteristics

2.3.1 Inclusion Criteria

Individuals were included if they are students currently enrolled in a professional CAATE-accredited athletic training program.

2.3.2 Exclusion Criteria

Individuals were excluded if they were students that are members of the NATA who are credentialed athletic trainers.

2.4 Instrumentation

2.4.1 Qualtrics Online Survey Software

Survey responses were uploaded into the Qualtrics (Provo, UT) online survey software, a system utilized by the University of Pittsburgh. In this study, athletic training students were asked to answer 21 questions regarding their current mental health status. There were demographic questions relating to the individual such as the current clinical site, clinical hours completed per week, location of institution, and year of study.

2.4.2 The Depression Anxiety Stress Scales – Short Form (DASS-21)

The DASS-21 survey encompasses three mental health disorders: depression, anxiety, and stress. The survey is composed of 21 questions. Each of the subset mental health disorders has seven questions directly associated with the disorder. The question order is randomized so the participants do not know which subset the question is about. Studies have reported high internal consistency reliability (range =0.82-0.97)[52]. The DASS-21 survey has a strong support as a total scale as it pertains to mental health related disorders[52].

2.5 Procedures

2.5.1 Data Collection

Research subjects received an email invitation with a brief synopsis of the study purpose and a link to the online survey. The initial contact email and reminder emails were sent out by the NATA. The subjects then read through the inclusion criteria and acknowledge their intent to continue to participate in the study. Subject participation was voluntary, and participants had ability to withdrawal at any point. All the survey responses remained anonymous. The participant filled out a section regarding demographics. The demographic section consisted of personal, university, and AT specific questions that were answered to the best of their abilities. The subjects then proceeded to the following section assessing current mental health. Mental health was assessed using the DASS-21 which scored their mental health on a Likert scale that used "Never, Sometimes, Often, and Almost Always". The data collection period lasted for six weeks. Survey

reminders were sent bi-weekly following the email invitation by the NATA. The data was collected and recorded in Qualtrics.

2.6 Data Reduction

All responses were reviewed in the Qualtrics Survey Software. Any responses that contained identifiable subject factors such as name or name of school were excluded, as that did not grant complete anonymity. Any response where the subject responded *no* to being a student in a CAATE accredited professional program were extracted and not able to complete the survey. Incomplete responses were included to collect as much data as possible.

2.7 Data Analysis

Data was collected via Qualtrics Core XM Online Survey Software (Qualtrics XM, Provo UT, USA). Descriptive statistics were calculated for all variables [mean, standard deviation, median, proportion, as appropriate]. All outcomes were described for the whole sample and then describe after stratification by sex and academic year. The association between student demographic and mental health symptoms were analyzed using independent sample t-test {or Wilcoxon Rank Sum test}s for binary independent variables, analysis of variance {or Kruskal Wallis test} for multinomial independent variable. Statistical analysis was conducted using SPSS Version 28 (IMB Inc, Armonk, NY). Statistical significance was decided a *priori* at alpha = 0.05, two sided.

3.0 Results

The data collection period lasted for six weeks, from November 14th 2023 to December 26th 2023, and 192 individuals responded to the survey. There were eight incomplete surveys that were discarded from the results. Of the 184 remaining responses, twelve of the participants were not part of a CAATE-accredited professional program and were discarded, leaving 172 participants. Lastly four participants were discarded for not participating in clinical education. This left 168 athletic training students who completed the survey. The following sections are the results of those who completed the survey responses.

3.1 Demographics

3.1.1 Participants' Preferred Gender

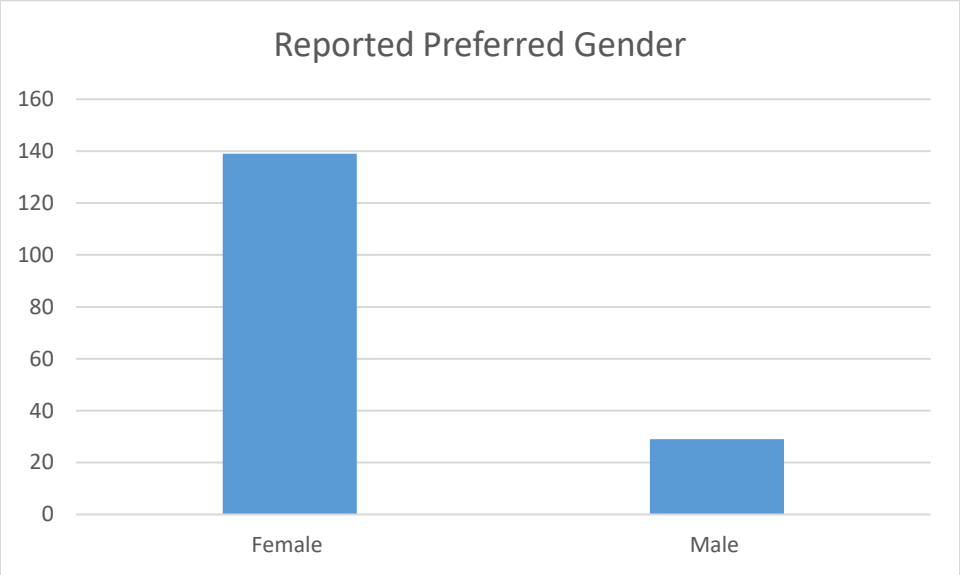


Figure 1: Reported Preferred Gender

What is your preferred gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Transgender Female (3)
- ☐ Transgender Male (4)
- ☐ Non-Binary (5)
- ☐ Agender/ I do not identify with a gender (6)
- ☐ Prefer not to state (7)

Figure 2: Preferred Gender Options

3.1.2 Participants' Current Level of study

Participants reported their current year of study in their program, with the highest percentage being 1st year master's, followed by 2nd year master's, 44.6% and 41.1% respectively. One of the participants selected multiple answers that may not be possible for an academic level of study, selecting junior and 2nd year master student. Figure 2 represents the participants' level of study.

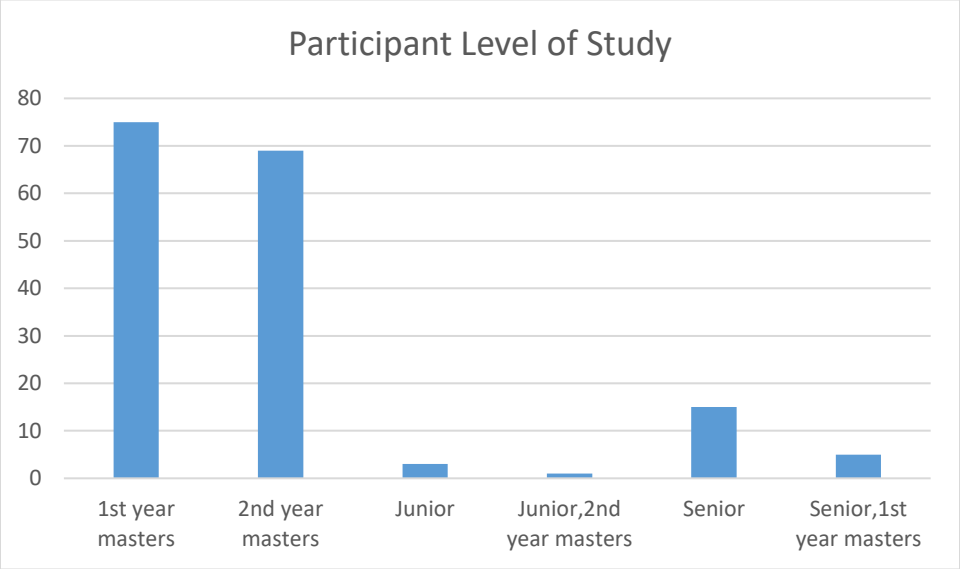


Figure 3: Level of Study

3.1.3 Participants' Region Location of University/Institution

The United States was divided by region based on geographical state location, shown in Figure 4. The geographical regions listed were Midwest, Northeast, Southeast, Southwest, and

West. Based upon the geographical state the participant's institution is located, participants chose the closest associated region. The results were spread out with Midwest having 24.4%, followed by Southeast (22.0%), and West (21.4%).

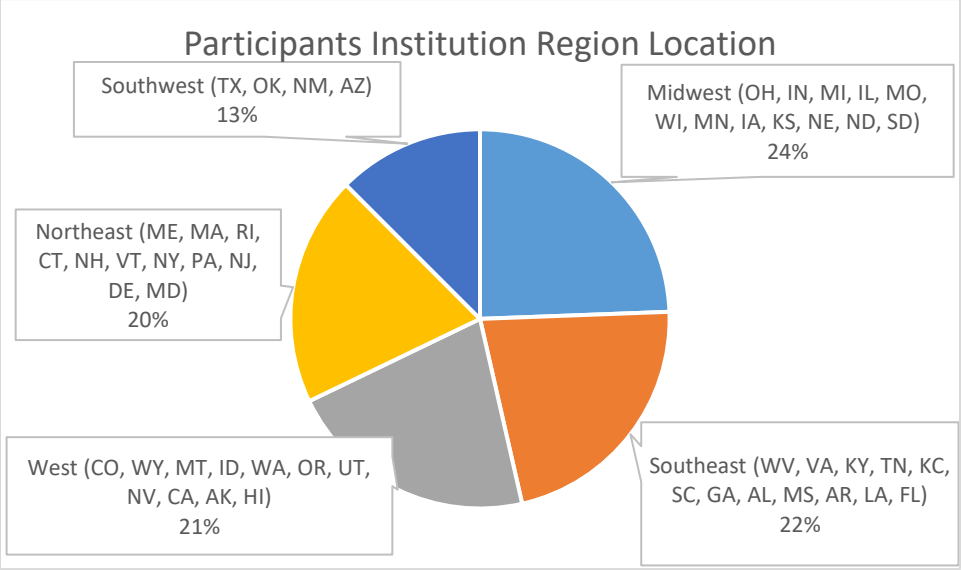


Figure 4: Region Location

3.1.4 Participants' Enrolled University /Institution NCAA Division Classification

The National Collegiate Athletic Association (NCAA) Division Classification was used to determine the institution classification of the CAATE accredited program in which the participant was enrolled. The NCAA divisions were created to align like minded campuses, and the three division structure was adopted in 1973[53]. This division classification was used to create fair playing fields for teams from these similar schools and provide college athletes more opportunities to participate in national championships[53]. Figure 5 shows that the majority of participants (64.9%) were enrolled in a Division I institution.

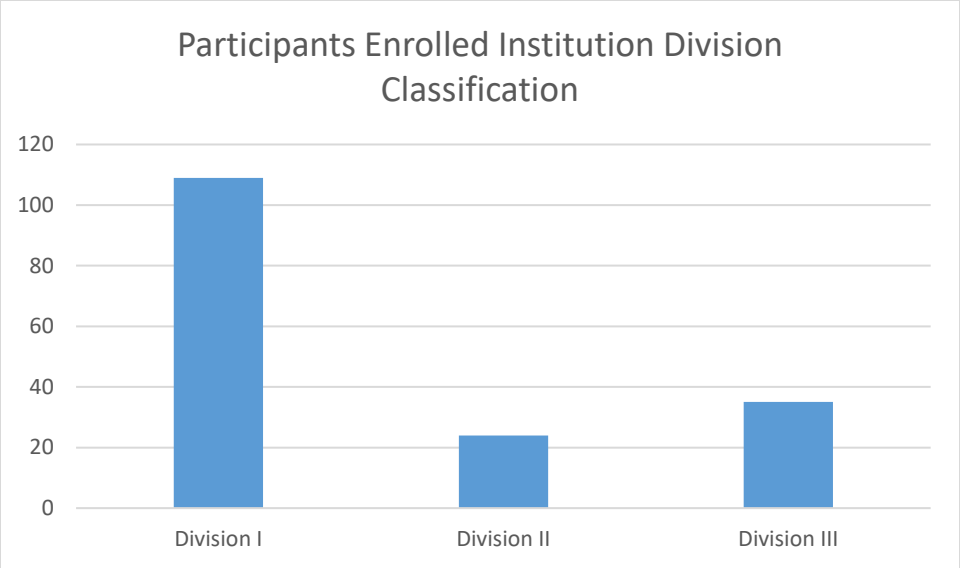


Figure 5: Enrolled Division Classification

3.1.5 Participants' Current Clinical Preceptor Setting

The clinical preceptor setting identified where the student is currently placed for their clinical rotations. An ATS will complete clinical experience under the supervision of a certified athletic trainer with preceptor training. Clinical setting is where the student will go to conduct clinical work, each institution has different clinical sites that sign agreements for their students to participate in clinical hours. These agreements can include, high schools, colleges, and others such as rehabilitation clinic. The highest frequency of responses were NCAA Division I (38.7%) and high school (33.9%). Participants options included NCAA Division I, II, III, High school, NAIA, professional sports, rehabilitation clinic, and other.

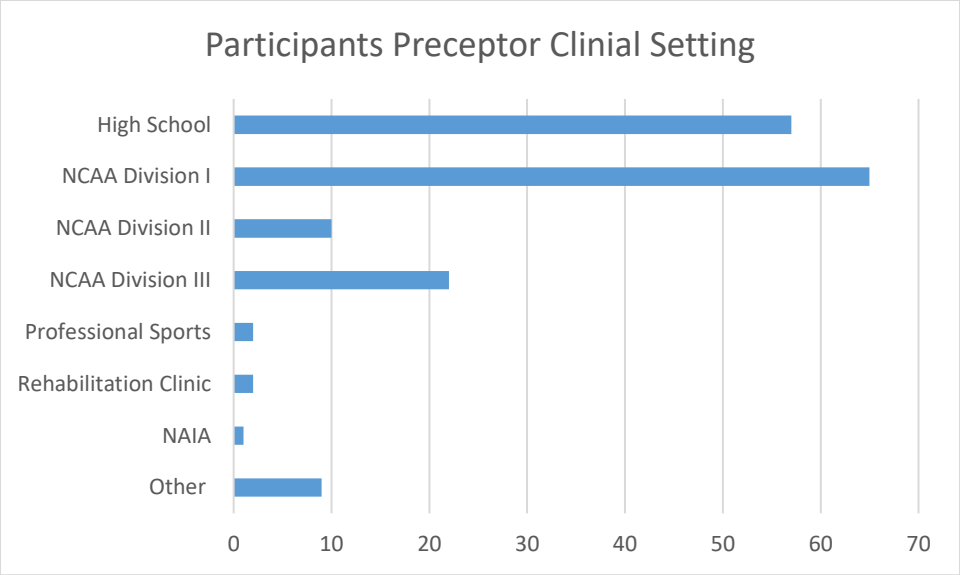


Figure 6: Preceptor Clinical Setting

3.1.6 Participants' Weekly Clinical Hours

ATSs are required to complete clinical hours, which are dependent upon specific program guidelines. In an average week, 72.0% of participants completed 15-30 hours. Zero (0) hours was an option that was used to include anyone who was still a part of a CAATE-accredited program who did not complete clinical work during the survey period. Figure 7 shows how many hours on average per week participants completed clinical education.

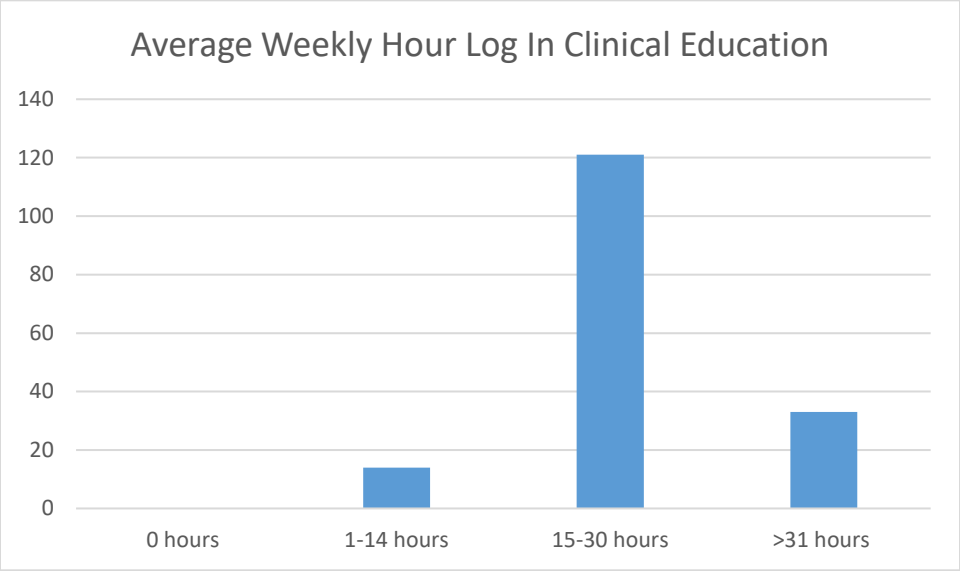


Figure 7: Weekly Hours Participating in Clinical Education

3.1.7 Participants' Immersive Experience

A clinical immersive experience is where the participant does not take classes but instead completes only clinical hours with a clinical preceptor for a set amount of time based on program guidelines. Of the 168 participants 79.2% were not in a clinical immersive stage in their program during the time of this survey November 14th 2023 to December 26th 2023.

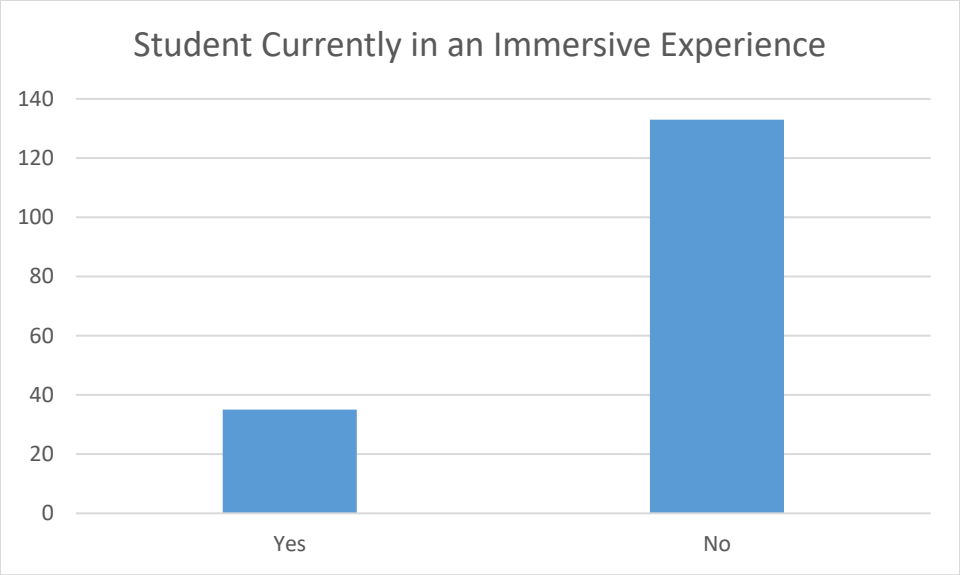


Figure 8: Currently Taking Part in an Immersive Experience

3.1.8 Participants' Satisfaction of Clinical Placement

This survey identified that 85.1% of participants were satisfied with their current clinical placement. There was no descriptive terminology used to define 'satisfaction', the respondents were not able to input any feedback for their reasoning of satisfaction or unsatisfaction. Participants were able to choose satisfied, unsatisfied, or neither which is shown in Figure 8.

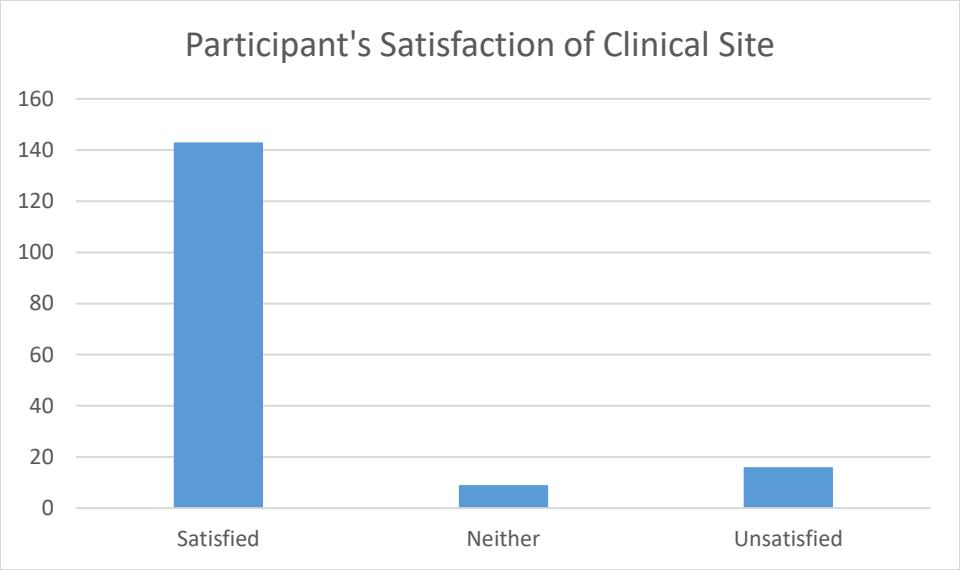


Figure 9: Clinical Site Satisfaction

3.2 Mental Health Questionnaire

In the Mental Health Questionnaire, participants were asked questions related to mental health conditions derived from a DASS-21 to examine depression, anxiety, and stress over the past week. Participants were asked to self-report the frequency of symptoms categorized into depression, anxiety, and stress over the last week. The participants were asked to report the frequency of symptoms utilizing the following scales; Almost Always, Often, Sometimes, and Never. The following categories were defined as: Almost Always - applied to me very much, or most of the time; Often - applied to me to a considerable degree, or a good part of the time; Sometimes - applied to me to some degree, or some of the time; and Never – did not apply to me at all. Each symptom scale had an associated number to it for scoring purposes; Almost Always (3), Often (2), Sometimes (1), Never (0). The scores were calculated by individual sections, and

then the score was multiplied by two because the short form was used. The questions are as followed:

1) I found it hard to wind down
2) I was aware of dryness of my mouth
3) I couldn't seem to experience any positive feeling at all
4) I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)
5) I found it difficult to work up the initiative to do things
6) I tended to over-react to situations
7) I experienced trembling (eg, in the hands)
8) I felt that I was using a lot of nervous energy
9) I was worried about situations in which I might panic and make a fool of myself
10) I felt that I had nothing to look forward to
11) I found myself getting agitated
12) I found it difficult to relax
13) I felt down-hearted and blue
14) I was intolerant of anything that kept me from getting on with what I was doing
15) I felt I was close to panic
16) I was unable to become enthusiastic about anything
17) I felt I wasn't worth much as a person
18) I felt that I was rather touchy
19) was aware of the action of my heart in the absence of physical exertion (eg,sense of heart rate increase, heart missing a beat)

20) I felt scared without any good reason

21) I felt that life was meaningless

DASS Severity Ratings

(Multiply summed scores by 2)

Severity	Depression	Anxiety	Stress
Normal	0 - 9	0 - 7	0-14
Mild	10 - 13	8 - 9	15-18
Moderate	14 – 20	10 – 14	19 – 25
Severe	21 – 27	15 – 19	26 – 33
Extremely Severe	28+	20+	34+

Figure 10: DASS-21 Severity Rating Sheet

3.2.1 Responses to Depression Related Questions

Table 1 represents the participants' perceived level of depression from the seven questions oriented on depression from the mental health screen. "Never" was the highest reported symptom at 47%, followed by "sometimes" with more than a third of the responses.

Table 1: Depression Severity Scoring

Depression Severity		
Severity	Frequency	Percentage
Normal	92	55%
Mild	27	16%
Moderate	32	19%
Severe	12	7%
Extremely Severe	5	3%

Table 2: Depression Response Scale

	Question 3	Question 5	Question 10	Question 13	Question 16	Question 17	Question 21	Percent Total
Almost Always	1	21	4	6	1	10	3	3.91%
Often	16	44	12	35	8	16	6	11.65%
Sometimes	79	71	62	76	75	43	33	37.33%
Never	72	32	90	51	84	99	126	47.11%

Question 3 - I couldn't seem to experience any positive feeling at all

Question 5 - I found it difficult to work up the initiative to do things

Question 10 - I felt that I had nothing to look forward to

Question 13 - I felt down-hearted and blue

Question 16 - I was unable to become enthusiastic about anything

Question 17 - I felt I wasn't worth much as a person

Question 21 - I felt that life was meaningless

3.2.2 Responses to Anxiety Related Questions

Table 2 shows the seven questions associated with anxiety and the distribution of responses from the 168 participants. Around half of the participants never felt anxiety over the past week at the time the survey was taken.

Table 3: Anxiety Severity Scoring

Anxiety Severity		
Severity	Frequency	Percentage
Normal	73	43%
Mild	14	8%
Moderate	37	22%
Severe	22	13%
Extremely Severe	22	13%

Table 4: Anxiety Response Scale

	Question 2	Question 4	Question 7	Question 9	Question 15	Question 19	Question 20	Percent Total
Almost Always	5	1	4	13	5	7	4	3.32%
Often	36	18	13	38	20	16	24	14.03%
Sometimes	56	43	47	65	63	75	49	33.84%
Never	71	106	104	52	80	70	91	48.81%

Question 2 - I was aware of dryness of my mouth

Question 4 - I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)

Question 7 - I experienced trembling (eg, in the hands)

Question 9 - I was worried about situations in which I might panic and make a fool of myself

Question 15 - I felt I was close to panic

Question 19 - I was aware of the action of my heart in the absence of physical exertion (eg,sense of heart rate increase, heart missing a beat)

Question 20 - I felt scared without any good reason

3.2.3 Responses to Stress Related Questions

The responses in Table 3 show all 168 participants' answers to the seven questions that were related to stress. Almost half of the participants responded "sometimes" to the seven questions that related to stress. Less than a tenth stated "almost always" feeling stress during the time in which the participant completed the survey.

Table 5: Stress Severity Scoring

Stress Severity		
Severity	Frequency	Percentage
Normal	90	54%
Mild	24	14%
Moderate	33	20%
Severe	20	12%
Extremely Severe	1	1%

Table 6: Stress Responses Scale

	Question 1	Question 6	Question 8	Question 11	Question 12	Question 14	Question 18	Percent Total
Almost Always	21	6	13	5	28	4	2	6.72%
Often	48	28	55	46	50	16	13	21.77%
Sometimes	83	84	67	82	71	61	53	42.60%
Never	16	50	33	35	19	87	100	28.91%

Question 1 - I found it hard to wind down

Question 6 - I tended to over-react to situations

Question 8 - I felt that I was using a lot of nervous energy

Question 11 - I found myself getting agitated

Question 12 - I found it difficult to relax

Question 14 - I was intolerant of anything that kept me from getting on with what I was doing

Question 18 - I felt that I was rather touchy

3.3 Relationships Between Student Demographic and Mental Health Screen

The following tables depict the relationships of stress, depression, and anxiety from the mental health questionnaire and variables of the student's demographic. The proportion of responses in each category of the mental health questionnaire were compared to the proportion of responses in each category of the student demographic sections via Fischer's Exact Tests. Mental

health conditions (stress, depression, and anxiety) were cross tabulated with the variables associated with student demographics (gender, level of study, institution region, NCAA division classifications, clinical hours, preceptor setting, immersive experience, and satisfaction). Tests that resulted in statistically significant p-values ($p < 0.05$) are represented below. A majority of the tests were not significantly significant, and they were included in the Appendix #.

3.3.1 Student Demographics Related to Stress

There was a significant association between preferred gender and stress for Question 8. Females reported 'Often' and 'Sometimes' of feeling of using a lot of nervous energy, where almost half of the males responded 'Never'.

Question 8 "I felt that I was using a lot of nervous energy."

Table 7: Gender and Stress Associations

		Almost Always		Often		Sometimes		Never		p-value
Question #1	Female	19	13.7%	40	28.8%	67	48.2%	13	9.35%	0.825
	Male	2	6.9%	8	27.6%	16	55.2%	3	10.34%	
Question #6	Female	6	4.3%	26	18.7%	69	49.6%	38	27.34%	0.22
	Male	0	0.0%	2	6.9%	15	51.7%	12	41.38%	
Question #8	Female	12	8.6%	47	33.8%	59	42.4%	21	15.11%	0.022
	Male	1	3.4%	8	27.6%	8	27.6%	12	41.38%	
Question #11	Female	3	2.2%	38	27.3%	71	51.1%	27	19.42%	0.25
	Male	2	6.9%	8	27.6%	11	37.9%	8	27.59%	
Question #12	Female	24	17.3%	42	30.2%	60	43.2%	13	9.35%	0.408
	Male	4	13.8%	8	27.6%	11	37.9%	6	20.69%	
Question #14	Female	4	2.9%	14	10.1%	48	34.5%	73	52.52%	0.753
	Male	0	0.0%	2	6.9%	13	44.8%	14	48.28%	
Question #18	Female	2	1.4%	12	8.6%	48	34.5%	77	55.40%	0.126
	Male	0	0.0%	1	3.4%	5	17.2%	23	79.31%	

Table 8 below shows the level of study and stress. The following demographic variables were collapsed into 'Graduate' and 'Undergraduate' responses. 1st year and 2nd year masters were collapsed into Graduate responses and senior and junior were changed to Undergraduate. Graduate students tended towards reporting feeling stressed "almost always" and "often" and undergraduate students tended to feel stress sometimes to never more frequently.

Question 12 "I found it difficult to relax"

Table 8: Level of Study and Stress Associations

		Almost Always		Often		Sometimes		Never		p-value
Question #1	Graduate	19	12.7%	46	30.7%	69	46.0%	16	10.67%	0.068
	Undergraduate	2	11.1%	2	11.1%	14	77.8%	0	0.00%	
Question #6	Graduate	5	3.3%	26	17.3%	75	50.0%	44	29.33%	0.752
	Undergraduate	0	0.0%	2	11.1%	9	50.0%	6	33.33%	
Question #8	Graduate	12	8.0%	52	34.7%	55	36.7%	31	20.67%	0.128
	Undergraduate	1	5.6%	3	16.7%	12	66.7%	2	11.11%	
Question #11	Graduate	5	3.3%	42	28.0%	71	47.3%	32	21.33%	0.819
	Undergraduate	0	0.0%	4	22.2%	11	61.1%	3	16.67%	
Question #12	Graduate	27	18.0%	40	26.7%	64	42.7%	19	12.67%	0.052
	Undergraduate	1	5.6%	10	55.6%	7	38.9%	0	0.00%	
Question #14	Graduate	3	2.0%	14	9.3%	56	37.3%	77	51.33%	0.51
	Undergraduate	1	5.6%	2	11.1%	5	27.8%	10	55.56%	
Question #18	Graduate	2	1.3%	12	8.0%	50	33.3%	86	57.33%	0.463
	Undergraduate	0	0.0%	1	5.6%	3	16.7%	14	77.78%	

The responses showed significant associations between the region of institution and stress. The variables were collapsed to 'North' and 'South', the variables included in North were Midwest and Northeast, while the South covered Southwest, Southeast, and West. In question 14, respondents from the South had 'often' felt more stress compared to the North region.

Question 14 "I was intolerant of anything that kept me from getting on with what I was doing"

Table 9: Region of Institution and Stress Associations

		Almost Always		Often		Sometimes		Never		p-value
Question #1	South	13	13.8%	27	28.7%	45	47.9%	9	9.57%	0.94
	North	8	10.8%	21	28.4%	38	51.4%	7	9.46%	
Question #6	South	1	1.1%	19	20.2%	45	47.9%	29	30.85%	0.145
	North	5	6.8%	9	12.2%	39	52.7%	21	28.38%	
Question #8	South	9	9.6%	25	26.6%	42	44.7%	18	19.15%	0.206
	North	4	5.4%	30	40.5%	25	33.8%	15	20.27%	
Question #11	South	3	3.2%	23	24.5%	51	54.3%	17	18.09%	0.424
	North	2	2.7%	23	31.1%	31	41.9%	18	24.32%	
Question #12	South	12	12.8%	29	30.9%	42	44.7%	11	11.70%	0.506
	North	16	21.6%	21	28.4%	29	39.2%	8	10.81%	
Question #14	South	3	3.2%	14	14.9%	35	37.2%	42	44.68%	0.018
	North	1	1.4%	2	2.7%	26	35.1%	45	60.81%	
Question #18	South	1	1.1%	5	5.3%	32	34.0%	56	59.57%	0.565
	North	1	1.4%	8	10.8%	21	28.4%	44	59.46%	

Table 10 showed statistically significant differences between NCAA institution classification and stress. The demographic variables were collapsed into Division I and II, and Division III to assess differences in the settings. The overall tendency is Division I and II report ‘never’ feeling stress more frequently, and Division III ‘almost always’ report stress on average.

Question 18 “I felt that I was rather touchy”

Table 10: Enrolled NCAA Division Classification and Stress Associations

		Almost Always		Often		Sometimes		Never		p-value
Question #1	Division I and II	16	11.5%	37	26.6%	66	47.5%	14	10.07%	0.854
	Division III	5	17.2%	11	37.9%	17	58.6%	2	6.90%	
Question #6	Division I and II	4	2.9%	20	14.4%	67	48.2%	42	30.22%	0.432
	Division III	2	6.9%	8	27.6%	17	58.6%	8	27.59%	
Question #8	Division I and II	10	7.2%	42	30.2%	51	36.7%	30	21.58%	0.302
	Division III	3	10.3%	13	44.8%	16	55.2%	3	10.34%	
Question #11	Division I and II	4	2.9%	33	23.7%	68	48.9%	28	20.14%	0.475
	Division III	1	3.4%	13	44.8%	14	48.3%	7	24.14%	
Question #12	Division I and II	20	14.4%	40	28.8%	57	41.0%	16	11.51%	0.732
	Division III	8	27.6%	10	34.5%	14	48.3%	3	10.34%	
Question #14	Division I and II	3	2.2%	14	10.1%	44	31.7%	72	51.80%	0.323
	Division III	1	3.4%	2	6.9%	17	58.6%	15	51.72%	
Question #18	Division I and II	2	1.4%	6	4.3%	42	30.2%	83	59.71%	0.028
	Division III	0	0.0%	7	24.1%	11	37.9%	17	58.62%	

For weekly hours spent at a clinical site and stress, there were statistically significant findings. Participants who complete 15-30 hours weekly tended to answer ‘never’ feeling stress, whereas those on the extremes (1-14 or > 30 hours) had reported feeling stress ‘Often’ and ‘Sometimes’ around double of the 15-30 hour group.

Question 6 “I tended to over-react to situations”

Table 11: Clinical Hours Worked and Stress Related Questions

		Almost Always		Often		Sometimes		Never		p-value
Question #1	1 - 14 hours	1	7.1%	6	42.9%	7	50.0%	0	0.00%	0.293
	15-30 hours	16	13.2%	28	23.1%	63	52.1%	14	11.57%	
	>31 hours	4	12.1%	14	42.4%	13	39.4%	2	6.06%	
Question #6	1 - 14 hours	1	7.1%	3	21.4%	9	64.3%	1	7.14%	0.034
	15-30 hours	5	4.1%	17	14.0%	55	45.5%	44	36.36%	
	>31 hours	0	0.0%	8	24.2%	20	60.6%	5	15.15%	
Question #8	1 - 14 hours	0	0.0%	9	64.3%	5	35.7%	0	0.00%	0.158
	15-30 hours	11	9.1%	34	28.1%	49	40.5%	27	22.31%	
	>31 hours	2	6.1%	12	36.4%	13	39.4%	6	18.18%	
Question #11	1 - 14 hours	0	0.0%	6	42.9%	7	50.0%	1	7.14%	0.142
	15-30 hours	4	3.3%	27	22.3%	59	48.8%	31	25.62%	
	>31 hours	1	3.0%	13	39.4%	16	48.5%	3	9.09%	
Question #12	1 - 14 hours	4	28.6%	2	14.3%	8	57.1%	0	0.00%	0.389
	15-30 hours	19	15.7%	37	30.6%	48	39.7%	17	14.05%	
	>31 hours	5	15.2%	11	33.3%	15	45.5%	2	6.06%	
Question #14	1 - 14 hours	1	7.1%	1	7.1%	7	50.0%	5	35.71%	0.223
	15-30 hours	1	0.8%	13	10.7%	41	33.9%	66	54.55%	
	>31 hours	2	6.1%	2	6.1%	13	39.4%	16	48.48%	
Question #18	1 - 14 hours	2	14.3%	0	0.0%	5	35.7%	7	50.00%	0.076
	15-30 hours	0	0.0%	10	8.3%	37	30.6%	74	61.16%	
	>31 hours	0	0.0%	3	9.1%	11	33.3%	19	57.58%	

3.3.2 Student Demographic Related to Anxiety

There were significant associations between preferred gender and anxiety. Question 7,9, 15, and 20 show male respondents less frequently reported signs of anxiety, compared to females. Females frequently had more anxiety responding “almost always” more than males in all but one anxiety related question.

Question 7 “I experienced trembling (eg in the hands)”

Question 9 “I was worried about situations in which I might panic and make a fool of myself”

Question 20 “I felt scared without any good reason”

Table 12: Gender and Anxiety Association

		Almost Always		Often		Sometimes		Never		p-value
Question #2	Female	4	2.9%	26	18.7%	50	36.0%	59	42.45%	0.176
	Male	1	3.4%	10	34.5%	6	20.7%	12	41.38%	
Question #4	Female	1	0.7%	17	12.2%	37	26.6%	84	60.43%	0.412
	Male	0	0.0%	1	3.4%	6	20.7%	22	75.86%	
Question #7	Female	4	2.9%	12	8.6%	45	32.4%	78	56.12%	0.006
	Male	0	0.0%	1	3.4%	2	6.9%	26	89.66%	
Question #9	Female	12	8.6%	34	24.5%	57	41.0%	26	18.71%	0.030
	Male	1	3.4%	4	13.8%	8	27.6%	16	55.17%	
Question #15	Female	5	3.6%	19	13.7%	55	39.6%	60	43.17%	0.080
	Male	0	0.0%	1	3.4%	8	27.6%	20	68.97%	
Question #19	Female	6	4.3%	15	10.8%	64	46.0%	54	38.85%	0.372
	Male	1	3.4%	1	3.4%	11	37.9%	16	55.17%	
Question #20	Female	4	2.9%	22	15.8%	45	32.4%	68	48.92%	0.035
	Male	0	0.0%	2	6.9%	4	13.8%	23	79.31%	

Anxiety severity scoring shows statistical significant (p=0.044), when associated with gender. In this case, Table 13 has females reporting ‘extremely severe’ ratings of anxiety double that of males. On the opposite end males severity of ‘normal’ is two times the females severity of ‘normal’.

Table 13: Gender and Anxiety Severity Association

	Anxiety Severity and Gender				
Gender	Normal	Mild	Moderate	Severe	Extremely Severe
Female	55	11	31	22	20
	39.60%	7.90%	22.30%	15.80%	14.40%
Male	18	3	6	0	2
	62.10%	10.30%	20.70%	0.00%	6.90%
			p value = 0.044 **		

3.3.3 Student Demographic Related to Depression

There were reported statistically significant differences between satisfaction of clinical site and depression. Those who reported 'Unsatisfied' reveal feelings of depression 'Almost Always' doubling those who answered 'Satisfied'. Question 3 assessed "not being able to experience positive feelings", respondents who answered unsatisfied had a higher rate of being depressed 'Often' or 'Sometimes' more frequently.

Question 3 "I couldn't seem to experience any positive feeling at all

Question 16 "I was unable to become enthusiastic about anything"

Table 14: Clinical Satisfaction and Depression Associations

		Almost Always		Often		Sometimes		Never		p-value
Question #3	Satisfied	0	0.0%	10	7.0%	69	48.3%	64	44.76%	0.020
	Neither	0	0.0%	2	12.5%	3	18.8%	4	25.00%	
	Unsatisfied	1	11.1%	4	44.4%	7	77.8%	4	44.44%	
Question #5	Satisfied	17	11.9%	36	25.2%	62	43.4%	28	19.58%	0.413
	Neither	0	0.0%	5	55.6%	3	33.3%	1	11.11%	
	Unsatisfied	4	25.0%	3	18.8%	6	37.5%	3	18.75%	
Question #10	Satisfied	3	2.1%	7	4.9%	53	37.1%	80	55.94%	0.100
	Neither	0	0.0%	2	22.2%	3	33.3%	4	44.44%	
	Unsatisfied	1	6.3%	3	18.8%	6	37.5%	6	37.50%	
Question #13	Satisfied	5	3.5%	25	17.5%	67	46.9%	46	32.17%	0.237
	Neither	0	0.0%	4	44.4%	3	33.3%	2	22.22%	
	Unsatisfied	1	6.3%	6	37.5%	6	37.5%	3	18.75%	
Question #16	Satisfied	0	0.0%	5	3.5%	64	44.8%	74	51.75%	0.056
	Neither	0	0.0%	1	11.1%	3	33.3%	5	55.56%	
	Unsatisfied	1	6.3%	2	12.5%	8	50.0%	5	31.25%	
Question #17	Satisfied	8	5.6%	11	7.7%	36	25.2%	88	61.54%	0.179
	Neither	0	0.0%	1	11.1%	3	33.3%	5	55.56%	
	Unsatisfied	2	12.5%	4	25.0%	4	25.0%	6	37.50%	
Question #21	Satisfied	2	1.4%	3	2.1%	28	19.6%	110	76.92%	0.104
	Neither	0	0.0%	1	11.1%	2	22.2%	6	66.67%	
	Unsatisfied	1	6.3%	2	12.5%	3	18.8%	10	62.50%	

There were three different classifications for preceptor clinical setting. The variables were condensed to represent the most common types of clinical placements in ATS. These variables are now NCAA, High School, and Professional Sports/Rehabilitation. 'Other' was excluded from the data collection as it is not able to be analyzed. Those who answered in the professional sports/rehabilitation category answered 'often' most frequently. Respondents who answered high school were the only group to answer 'almost always'.

Question 10 "I felt that I had nothing to look forward to"

Table 15: Preceptor Clinical Setting and Depression Associations

		Almost Always		Often		Sometimes		Never		p-value
Question #3	NCAA	1	1.0%	11	11.2%	43	43.9%	43	43.88%	0.638
	High School	0	0.0%	4	7.0%	29	50.9%	24	42.11%	
	Pro/Rehab	0	0.0%	1	25.0%	1	25.0%	2	50.00%	
Question #5	NCAA	16	16.3%	21	21.4%	24	24.5%	37	37.76%	0.247
	High School	5	8.8%	18	31.6%	26	45.6%	8	14.04%	
	Pro/Rehab	0	0.0%	2	50.0%	2	50.0%	0	0.00%	
Question #10	NCAA	0	0.0%	8	8.2%	41	41.8%	49	50.00%	0.002
	High School	4	7.0%	1	1.8%	17	29.8%	35	61.40%	
	Pro/Rehab	0	0.0%	2	50.0%	1	25.0%	1	25.00%	
Question #13	NCAA	2	2.0%	20	20.4%	47	48.0%	29	29.59%	0.670
	High School	3	5.3%	10	17.5%	25	43.9%	19	33.33%	
	Pro/Rehab	0	0.0%	1	25.0%	3	75.0%	0	0.00%	
Question #16	NCAA	0	0.0%	5	5.1%	42	42.9%	51	52.04%	0.678
	High School	1	1.8%	2	3.5%	29	50.9%	25	43.86%	
	Pro/Rehab	0	0.0%	0	0.0%	2	50.0%	2	50.00%	
Question #17	NCAA	7	7.1%	10	10.2%	24	24.5%	57	58.16%	0.891
	High School	2	3.5%	5	8.8%	15	26.3%	35	61.40%	
	Pro/Rehab	0	0.0%	0	0.0%	2	50.0%	2	50.00%	
Question #21	NCAA	1	1.0%	4	4.1%	20	20.4%	73	74.49%	0.936
	High School	1	1.8%	2	3.5%	9	15.8%	45	78.95%	
	Pro/Rehab	0	0.0%	0	0.0%	1	25.0%	3	75.00%	

Depression had statisitical significance with clinical preceptor setting. In table 13, those who are unsatisfied with their clinical placement are at a higher risk of being categorized as ‘severe’ or ‘extremely severe’ on a depression scale. Of those who responded satisfied, 58% were in the ‘normal’ severity for depression.

Table 16: Clinical Satisfaction and Depression Severity Association

	Depression Severity and Clincal Satisfaction				
Clinical Satisfaction	Normal	Mild	Moderate	Severe	Extremely Severe
Satisfied	83	21	28	9	2
	58.00%	14.70%	19.60%	6.30%	1.40%
Neither	4	2	1	1	1
	44.40%	22.20%	11.10%	11.10%	11.10%
Unsatisfied	5	4	3	2	2
	31.30%	25.00%	18.80%	12.50%	12.50%
			p value = 0.052 **		

4.0 Discussion

This study was created to investigate the relationships between athletic training students (ATS) and their perceived level of mental health status during a one-week time period over the semester. While analyzing the survey responses in the demographic portion, the ATSs were mainly female, graduate students enrolled in CAATE accredited programs at Division I universities. The participants were evenly distributed throughout the country, completing 15-30 clinical hours per week and the majority were satisfied with their clinical placement. Among the three mental health conditions that were screened, stress showed an increase in symptoms where participants answered 'sometimes' more frequently than 'never' on the symptom scale sheet. When assessing statistical significance there were seven reported differences out of the twenty-four tests that were conducted.

4.1 Mental Health of Athletic Training Students

There is lack of research devoted to mental health conditions in ATSs. The first specific aim of this study was to investigate perceived levels of depression, anxiety, and stress in athletic training students currently enrolled in a CAATE-accredited professional program. In addition, this study aimed to identify associations between student demographic information and mental health symptoms. The results of this study indicate that ATSs are more likely to show symptoms of being stressed than anxiety or depression. These results also showed differences in gender, year of study, weekly hours at clinical, and clinical placement satisfaction as they relate to the mental health questionnaire.

4.2 Stress Related Differences in Athletic Training Students

Of the three mental health problems discussed in this study, stress had the most associations with student demographics. Stress can accumulate due to numerous reasons as discussed earlier, such as financial hardships, home-life, and school as well. This study associated females with higher levels of perceived stress. Although there were 139 females and 39 males who finished and responded to the survey, percentages were used to assess statistical significance. All but one question, females responded 'Almost Always' more frequently than males, and the males responded 'Never' for 6 out of the 7 questions asked related to stress. There was statistical significance for question 8 that asked, 'how often nervous energy was being used', in which case females answered almost always, often, or sometimes over 85% of the time, and males answered the same at 59%. This study suggests that females have higher incidences of perceived stress then males. These results are different from a study by Fauzi et. al, who found no significant differences in stress between gender, using the DASS-21 survey[4]. The study examined 449 individuals who were completing an undergraduate degree in a health-science field. Fauzi Et al. also examined these students across all four years of their academic career, which was found to be statistically significant[4]. Fauzi et al, saw that stress scores were significantly associated with the year of study ($p = 0.033$) with higher stress scores in students of higher years of study[4].

As individuals progress through their academic career, classes and coursework can become increasingly difficult. For this study, the level of academic study was found to be statistically significant when correlated with stress. The variables were condensed into 'graduate' and 'undergraduate' which had 150 and 18 responses respectively. The differences seen were with the questions regarding the ability to 'wind down' and 'difficulty to relax'. Graduate students surprisingly answered the extremes, 'almost always' or 'never', more frequently than

undergraduate students for question 1 and question 12. For these questions, there was not an undergraduate student who answered ‘never’. The results could point out that undergraduate students are under more stress than those in graduate programs. Level of study was also seen in a study by Atkinson et al. which had 252 Australian and international medical students complete a DASS-21 survey[54]. The results were flipped where graduate students had answered severe or extreme rates of stress. Close to a tenth of graduate students were examined to have severe stress and those in undergraduate studies only 2.3% had severe stress[54].

Another impact on stress is where the institution or college is located. In this study, the variables were condensed to ‘North’ and ‘South’. This was condensed broadly to distinguish differences between those states who typically have a warmer climate and those who have a colder climate. Seasonal Affective Disorder is a condition that involves depressive symptoms, and the effects of depression can cause stress[55,56]. Low et. al, used two surveys to examine seasonal affective disorder of 76 individuals aged 18-22[55]. The study mainly looked at seasonal affective disorder and the relationship with depression, but found that the southern group had higher scores of being in the category associated with seasonal affective disorder[55]. This aligns with the results found that the region of institution located in the south was associated with higher response of stress. Those respondents who are in the south answered ‘often’ around four times more than those in the north category. There are 3,982 degree-granting post-secondary institutions around the country[57], so there may be variability in stress due to the NCAA division classification. CAATE 2021-2022 Analytic Report shows that Midwest states have the highest amount of programs, followed by Texas.

The NCAA division class was also condensed into two classifications, Division I and II were combined and Division III was left alone. This was considered to create better understanding

if there were differences between stress and the smaller division schools. Of the 3,982 insititutions, CAATE is responsible for accrediting more than 360 professional (entry-level) athletic training programs, 16 post-professional degree programs and two Residencies[58]. There are 363 NCAA division I institutions, 307 NCAA Division II institutions, and 438 Division III institutions[59]. When deciding to combine Division I and Division II institutions, Gallucci et al. study was used, which examined collegiate athletic training facilities and staffing[59]. This study showed that Division I and II institutions had similar ATSs providing health care services with 27.1 and 26.9 respectively, compared to Division III where there were only 17.9 ATSs[59]. The athletic training total number of facilities were higher in division I institution, as well as satellite facilities, and total office space from 2017[59] Respondents at NCAA division III schools answered 'often' four times more commonly on question 18. An overall trend was those who selected division III responded with 'almost always' repeatedly compared to those in the NCAA division I and II classification.

Individuals who completed the survey were completing clinical hours at their CAATE accredited athletic training program. On top of schoolwork, AT students complete clinical hours to increase their knowledge and practice their clinical skills. Hours worked have been found to be a contributing factor for role strain, in a study examining graduate assistant athletic trainers[60]. A majority of the participants (72%) responded that they complete 15-30 hours on an average week. The amount of hours required is determined upon the specific institutions guidelines which can vary slightly. The participants who answered 15-30 hours per week, typically answered 'never' when asked about stressed related questions. The other choices, 1-14 and >30, had more answers to 'often', showing that working too many hours (>30) could have an impact on overall stress. Also working 1-14 hours per week could mean they are sacrificing clinical work for other means, which in turn could still increase stress for these individuals. The lower end of clinical education

hours could be attributed to outside work, home life, or increase in school work. Mazerolle et. al, stated that working long hours have been reported with signs of burnout in the graduate assistant athletic trainers[60].

4.3 Depression Related Differences in Athletic Training Students

Athletic training students, during their time enrolled in a CAATE-accredited program, will have to endure classwork and clinical hours. During clinical hours ATSs need to be an integral part of the staff that makes up their clinical rotation, which includes being present and available to provide assistance as needed. If an ATSs likes their clinical rotation it can help the student to want to continue to go to their clinical education and increase their knowledge. The survey asked about satisfaction at their current clinical site. With responses being 'satisfied', 'neither', and 'unsatisfied', and this was for the past week so results could change depending on when the survey was taken. Of the 168 individuals who completed the survey, 143 stated they were satisfied with their clinical placement. Those participants who stated they were unsatisfied with their clinical placement answered 'almost always' for depressive questions on the DASS-21. These statistics can be seen in a similar study that surveyed 508 college students, that looked for overall life satisfaction[61]. Where Mahmoud et. al, found there to be correlation between depression and life satisfaction ($p = -.40$)[61]. Satisfaction can play a vital role in the participants' well-being and mental health. The clinical setting which the preceptor is in can also have an impact on one's mental health.

For clinical placements, the variables were compacted into three groups. The NCAA division classification I, II, and III as well as NAIA created the NCAA group, high school was a

stand-alone group, and 'Pro/rehab' was created from professional sports and a rehabilitation clinic. These were chosen to be the new groups as it is applicable to the different types of settings that are commonly seen, college, high school and professional sports or a clinic. Depression was associated with preceptor clinical setting, with question 10 being statistically significant. The pro/rehab group answered 'often' when evaluating depression, with question 10, which could be due to the low sample size. The NCAA group answered 'sometimes' close to double that of pro/rehab and HS.

4.4 Anxiety Related Differences in Athletic Training Students

ATS only had one statistically significance parameter when asked about anxiety, and that was gender. Overall males typically answered 'never' to anxiety related questions. The females answered 'almost always' and 'sometimes' at a higher rate than males. There were four questions that had statistical significance when looking at anxiety. In China a study examined 1892 college students, from all majors and academic performance using the DASS-21[62]. Gao et. al, studied stress, depression, and anxiety among all four years and between gender[62]. The researcher found that females had higher cases of anxiety than males did throughout all four years of college, with the highest difference coming freshman year[62]. These results from Gao et. al, coincide with the results gathered from this study where females answer higher rates of anxiety severity on a DASS-21 survey[62].

4.5 Limitations

There were several limitations to this study that need to be addressed.

Another limitation to this study is the time at which students responded to the survey. Since the survey was a 6-week period, there could have been multiple factors that influenced their mental health such as added financial stress, finals, breaks, etc. Participants who answered while on a break could have impacted their mental health questionnaire scoring because they were not in school and completing clinical work. Ideally the survey was to be completed while the individual was at school and continuing their clinical education.

There are a plethora of mental health screening devices that are available. The DASS-21 was chosen to assess stress, anxiety, and depression in 21 questions. The DASS-21 has been used in studies to assess core symptoms of depression, anxiety, and stress[63]. Since there is a long form of this survey, using the short form could become a limitation when scoring the severity of each subset. There are other mental health questionnaires that assess overall mental health status such as the Patient Health Questionnaire (PHQ-9), General Health Questionnaire (GHQ), and Mental Health Quality of Life Questionnaire (MHQoL), which are different tools that can be used[64,65].

The last limitation is the stigma surrounding mental health. Although this study was anonymous, participants may not have felt comfortable to answer with complete honesty. The stigma associated with mental health may have led participants to disclose their mental health status even for themselves[27]. This could lead to improperly answering questions just out of the individual's own integrity to state they do not have mental health problems.

4.6 Future Research

The results of this study can be used to add to the body of knowledge of mental health and athletic training students. There are studies that address health science, medical, and physical therapy students, but very little knowledge of ATSs mental health status. More research can be done with respect to ATSs as they are completing close to the same clinical work as other health science students as well. Some unique stressors for the ATSs include clinical hours, responsibility for student health, game and travel schedules that can impact their own mental health[23]. Investigating more specific reasons why there may be an increase in mental health symptoms could be beneficial for ATSs.

Future research could be used to assess weekly mental health logs. These logs could be used to determine if there is a natural rise in mental health conditions during certain times of the semester, and possible ways to mitigate that for ATS. Looking at weekly trends for a cohort of ATS could allow for faculty to assess why and when these spikes are occurring and ways to combat those problems. This could be beneficial for both faculty and students as students will be more open and have a sense of safety with faculty members. A study by Lamont et al., examined nurses and the prevalence of taking "mental health days", which is any self-reported sickness absence which participants attribute to their mental wellbeing[66]. This study reported that over 50% of the 5,041 nurses who responded reported taking a mental health day[66]. It may be beneficial for students to have a built-in mental health day to regroup in their own lives as well.

In these studies, there are no baselines, which could have an important outlook on their mental health status. Having a baseline, right after a break or before schooling starts, will allow for students to assess their own mental health, and see how it changes weekly. If the students are honest with themselves, they may also find out what is causing them to have mental health status

changes. The individuals would then be able to talk with faculty or other peers to assess why these changes may be occurring.

4.7 Conclusion

This study is a first step in determining what factors may play a role in increasing mental health symptoms, specifically perceived stress, depression and anxiety, in athletic training students. The results of this study showed that gender, level of study, region of institution, university NCAA division classification, and weekly clinical hours had impacts on levels of stress for ATSs. Stress can be associated with many different variables, as well such as physical, financial, and mental pressure. These can have impacts on an individual's ability to think and work efficiently. Levels of depression had associations with satisfaction of clinical placement, and anxiety changes also due to gender. Those who responded with higher rates of depression were unsatisfied at their clinical placement, possibly leading to not wanting to go to complete clinical hours. In conclusion there are mental health commonalities in college, health science, and athletic training students. Mental health screenings may be consistently used for ATS in the future to determine if there are certain trends over a semester that show increases of stress, depression, or anxiety. Ultimately, the prevalence of stress, depression, and anxiety among ATSs emphasizes the importance of implementing proactive measures to support their mental health status throughout their academic career.

Appendix A : Survey Questionnaire

This survey will consist of two sections. The first section will consist of questions about your demographics. The second section will have questions about your current mental health status. Your answers are completely anonymous. This survey should take 5-10 minutes to complete. Your participation is completely voluntary, and you may withdraw at any time. To take this survey you must be currently enrolled in a CAATE-accredited professional program (a program that prepares you for the BOC exam), and participating in clinical education (you are currently assigned to a preceptor and going to the site). If you meet these requirements and would like to complete this survey, please click the arrow below to begin.

→

Are you currently enrolled in a CAATE-accredited professional program? (Your program prepares students to take the BOC examination)

- ○ Yes
- ○ No

→

Are you currently participating in clinical education? (Going to a clinical site with clinical preceptor)

- ○ Yes
- ○ No

→

What is your preferred gender?

- ○ Male
- ○ Female
- ○ Transgender Female
- ○ Transgender Male
- ○ Non-Binary
- ○ Agender/ I do not identify with a gender
- ○ Prefer not to state

What is your current level of study?

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior
- ☐ 1st year masters
- ☐ 2nd year masters

What region is your institution located in?

- ◯ Northeast (ME, MA, RI, CT, NH, VT, NY, PA, NJ, DE, MD)
- ◯ Midwest (OH, IN, MI, IL, MO, WI, MN, IA, KS, NE, ND, SD)
- ◯ Southeast (WV, VA, KY, TN, KC, SC, GA, AL, MS, AR, LA, FL)
- ◯ Southwest (TX, OK, NM, AZ)
- ◯ West (CO, WY, MT, ID, WA, OR, UT, NV, CA, AK, HI)

What NCAA division is your institution classified?

- ◯ Division I
- ◯ Division II
- ◯ Division III
- ◯ Other

What setting is your current clinical preceptor located in?

- ◯ NCAA Division I
- ◯ NCAA Division II
- ◯ NCAA Division III
- ◯ High School
- ◯ Performing Arts
- ◯ Industrial
- ◯ Military
- ◯ Professional Sports
- ◯ Rehabilitation Clinic
- ◯ NAIA
- ◯ Other

On average, how many clinical hours do you currently complete in a week? (Sunday - Saturday)

- ◯ 0 hours
- ◯ 1-14 hours
- ◯ 15-30 hours
- ◯ > 31 hours

Are you currently completing an immersive clinical experience? (full-time clinical, no in-person course work)

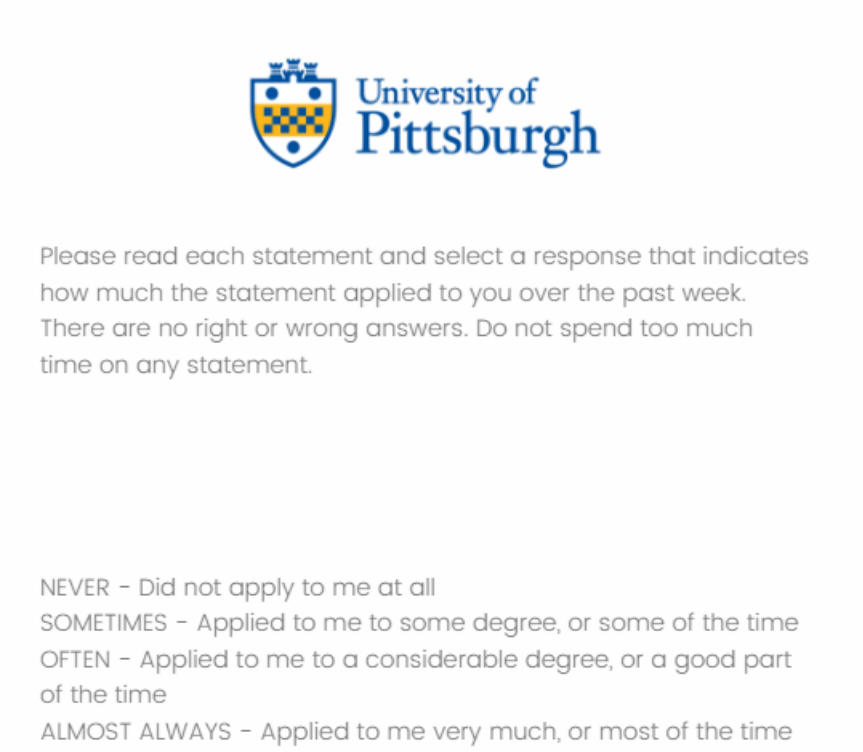
- ○ Yes
- ○ No

How satisfied are you with your current clinical placement?

- ○ Satisfied
- ○ Unsatisfied
- ○ Neither

This section will contain questions about your current mental health over the past seven (7) days.
Please answer the next set of questions to the best of your ability.

→



Appendix A.1 Individual Survey Questions

1) I found it hard to wind down
2) I was aware of dryness of my mouth
3) I couldn't seem to experience any positive feeling at all
4) I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)
5) I found it difficult to work up the initiative to do things
6) I tended to over-react to situations
7) I experienced trembling (eg, in the hands)
8) I felt that I was using a lot of nervous energy

9) I was worried about situations in which I might panic and make a fool of myself
10) I felt that I had nothing to look forward to
11) I found myself getting agitated
12) I found it difficult to relax
13) I felt down-hearted and blue
14) I was intolerant of anything that kept me from getting on with what I was doing
15) I felt I was close to panic
16) I was unable to become enthusiastic about anything
17) I felt I wasn't worth much as a person
18) I felt that I was rather touchy
19) was aware of the action of my heart in the absence of physical exertion (eg,sense of heart rate increase, heart missing a beat)
20) I felt scared without any good reason
21) I felt that life was meaningless

If you or someone you know is experiencing a mental health crisis, please reach out for help.

Call 911: If someone is in immediate danger.
Call 988: Get connected to the National Suicide Prevention Lifeline
Text "HOME" to 741741: anytime in the U.S. and connect to a crisis counselor.

ATs Care is a program designed to assist and support ATs and AT students navigating challenging situations, whether personally or professionally related.
Complete this form: http://forms.nata.org/ats-care-contact or call the ATs Care Hotline at 972-532-8821

Reaching out for help is the right thing to do. You are not alone.

→

Appendix B : Student Demographic and Mental Health Associations

Appendix B.1 Stress Tables

		Almost Always		Often		Sometimes		Never		p-value
Question #1	NCAA	11	11.2%	30	30.6%	49	50.0%	8	8.16%	0.887
	High School	9	15.8%	13	22.8%	29	50.9%	6	10.53%	
	Pro/Rehab	0	0.0%	1	25.0%	3	75.0%	0	0.00%	
Question #6	NCAA	2	2.0%	17	17.3%	49	50.0%	30	30.61%	0.421
	High School	4	7.0%	7	12.3%	26	45.6%	20	35.09%	
	Pro/Rehab	0	0.0%	1	25.0%	3	75.0%	0	0.00%	
Question #8	NCAA	7	7.1%	29	29.6%	43	43.9%	19	19.39%	0.445
	High School	5	8.8%	21	36.8%	20	35.1%	11	19.30%	
	Pro/Rehab	0	0.0%	2	50.0%	0	0.0%	2	50.00%	
Question #11	NCAA	3	3.1%	27	27.6%	51	52.0%	17	17.35%	0.519
	High School	2	3.5%	14	24.6%	24	42.1%	17	29.82%	
	Pro/Rehab	0	0.0%	1	25.0%	3	75.0%	0	0.00%	
Question #12	NCAA	15	15.3%	26	26.5%	48	49.0%	9	9.18%	0.426
	High School	12	21.1%	19	33.3%	19	33.3%	7	12.28%	
	Pro/Rehab	0	0.0%	1	25.0%	2	50.0%	1	25.00%	
Question #14	NCAA	2	2.0%	8	8.2%	36	36.7%	52	53.06%	0.683
	High School	2	3.5%	6	10.5%	19	33.3%	30	52.63%	
	Pro/Rehab	0	0.0%	1	25.0%	2	50.0%	1	25.00%	
Question #18	NCAA	0	0.0%	9	9.2%	33	33.7%	56	57.14%	0.102
	High School	2	3.5%	3	5.3%	13	22.8%	39	68.42%	
	Pro/Rehab	0	0.0%	0	0.0%	3	75.0%	1	25.00%	

		Almost Always		Often		Sometimes		Never		p-value
Question #1	Satisfied	15	10.5%	43	30.1%	72	50.3%	13	9.09%	0.313
	Neither	2	22.2%	1	11.1%	4	44.4%	2	22.22%	
	Unsatisfied	4	25.0%	4	25.0%	7	43.8%	1	6.25%	
Question #6	Satisfied	4	2.8%	23	16.1%	71	49.7%	45	31.47%	0.127
	Neither	0	0.0%	2	22.2%	7	77.8%	0	0.00%	
	Unsatisfied	2	12.5%	3	18.8%	6	37.5%	5	31.25%	
Question #8	Satisfied	13	9.1%	43	30.1%	57	39.9%	30	20.98%	0.648
	Neither	0	0.0%	5	55.6%	3	33.3%	1	11.11%	
	Unsatisfied	0	0.0%	7	43.8%	7	43.8%	2	12.50%	
Question #11	Satisfied	4	2.8%	35	24.5%	70	49.0%	34	23.78%	0.122
	Neither	0	0.0%	4	44.4%	4	44.4%	1	11.11%	
	Unsatisfied	1	6.3%	7	43.8%	8	50.0%	0	0.00%	
Question #12	Satisfied	24	16.8%	40	28.0%	62	43.4%	17	11.89%	0.901
	Neither	1	11.1%	3	33.3%	4	44.4%	1	11.11%	
	Unsatisfied	3	18.8%	7	43.8%	5	31.3%	1	6.25%	
Question #14	Satisfied	3	2.1%	13	9.1%	48	33.6%	79	55.24%	0.257
	Neither	0	0.0%	1	11.1%	5	55.6%	3	33.33%	
	Unsatisfied	1	6.3%	2	12.5%	8	50.0%	5	31.25%	
Question #18	Satisfied	1	0.7%	12	8.4%	44	30.8%	86	60.14%	0.541
	Neither	0	0.0%	0	0.0%	4	44.4%	5	55.56%	
	Unsatisfied	1	6.3%	1	6.3%	5	31.3%	9	56.25%	

		Almost Always		Often		Sometimes		Never		p-value
Question #1	Yes	8	22.9%	9	25.7%	15	42.9%	3	8.57%	0.257
	No	13	9.8%	39	29.3%	68	51.1%	13	9.77%	
Question #6	Yes	0	0.0%	8	22.9%	20	57.1%	7	20.00%	0.241
	No	6	4.5%	20	15.0%	64	48.1%	43	32.33%	
Question #8	Yes	4	11.4%	14	40.0%	11	31.4%	6	17.14%	0.461
	No	9	6.8%	71	53.4%	56	42.1%	27	20.30%	
Question #11	Yes	1	2.9%	8	22.9%	19	54.3%	7	20.00%	0.893
	No	4	3.0%	38	28.6%	63	47.4%	28	21.05%	
Question #12	Yes	5	14.3%	12	34.3%	15	42.9%	3	8.57%	0.899
	No	23	17.3%	38	28.6%	56	42.1%	16	12.03%	
Question #14	Yes	1	2.9%	1	2.9%	12	34.3%	21	60.00%	0.392
	No	3	2.3%	15	11.3%	49	36.8%	66	49.62%	
Question #18	Yes	0	0.0%	3	8.6%	12	34.3%	20	57.14%	0.921
	No	2	1.5%	10	7.5%	41	30.8%	80	60.15%	

	Stress Severity and Gender				
Gender	Normal	Mild	Moderate	Severe	Extremely Severe
Female	70	22	28	18	1
	50.40%	15.80%	20.10%	12.90%	0.70%
Male	20	2	5	2	0
	69.00%	6.90%	17.20%	6.90%	0.00%
			p value = 0.464		

	Stress Severity and Insitution Region				
Region	Normal	Mild	Moderate	Severe	Extremely Severe
North	39	10	17	8	0
	52.70%	13.50%	23.00%	10.80%	0.00%
South	51	14	16	12	1
	54.30%	14.90%	17.00%	12.80%	1.10%
			p value =0.882		

	Stress Severity and Level of Study				
Level of Study	Normal	Mild	Moderate	Severe	Extremely Severe
Graduate Students	80	20	29	20	1
	53.30%	13.30%	19.30%	13.30%	0.70%
Undergrad Students	10	4	4	0	0
	55.60%	22.20%	22.20%	0.00%	0.00%
			p value = 0.389		

	Stress Severity and NCAA Division Classification				
NCAA Division Class	Normal	Mild	Moderate	Severe	Extremely Severe
NCAA Divison I and II	74	20	25	13	1
	55.60%	15.00%	18.80%	9.80%	0.80%
NCAA Division III	16	4	8	7	0
	45.70%	11.40%	22.90%	20.00%	0.00%
			p value = 0.440		

	Stress Severity and Preceptor Setting				
Preceptor Setting	Normal	Mild	Moderate	Severe	Extremely Severe
High Sch	32	7	8	10	0
	56.10%	12.30%	14.00%	17.50%	0.00%
NCAA_NAI	53	14	20	10	1
	54.10%	14.30%	20.40%	10.20%	1.00%
ProRehab	2	1	1	0	0
	50.00%	25.00%	25.00%	0.00%	0.00%
			p value = 0.493		

	Stress Severity and Clinical Satisfaction				
Clinical Satisfaction	Normal	Mild	Moderate	Severe	Extremely Severe
Satisfied	81	19	26	16	1
	56.60%	13.30%	18.20%	11.20%	0.70%
Neither	4	1	4	0	0
	44.40%	11.10%	44.40%	0.00%	0.00%
Unsatisfied	5	4	3	4	0
	31.30%	25.00%	18.80%	25.00%	0.00%
			p value = 0.191		

	Stress Severity and Insitution Region				
Clinical Hours	Normal	Mild	Moderate	Severe	Extremely Severe
1-14 hours	5	3	3	3	0
	35.70%	21.40%	21.40%	21.40%	0.00%
15-30 hours	71	14	22	13	1
	58.70%	11.60%	18.20%	10.70%	0.80%
> 31 hours	14	7	8	4	0
	42.40%	21.20%	24.20%	12.10%	0.00%
			p value = 0.412		

Appendix B.2 Depression Tables

		Almost Always		Often		Sometimes		Never		p-value
Question #3	Division I and II	1	0.8%	13	9.8%	57	42.9%	62	46.62%	0.171
	Division III	0	0.0%	3	8.6%	22	62.9%	10	28.57%	
Question #5	Division I and II	16	12.0%	38	28.6%	54	40.6%	25	18.80%	0.564
	Division III	5	14.3%	6	17.1%	17	48.6%	7	20.00%	
Question #10	Division I and II	4	3.0%	9	6.8%	47	35.3%	73	54.89%	0.726
	Division III	0	0.0%	3	8.6%	15	42.9%	17	48.57%	
Question #13	Division I and II	5	3.8%	28	21.1%	59	44.4%	41	30.83%	0.987
	Division III	1	2.9%	7	20.0%	17	48.6%	10	28.57%	
Question #16	Division I and II	1	0.8%	6	4.5%	57	42.9%	69	51.88%	0.690
	Division III	0	0.0%	2	5.7%	18	51.4%	15	42.86%	
Question #17	Division I and II	7	5.3%	11	8.3%	34	25.6%	81	60.90%	0.519
	Division III	3	8.6%	5	14.3%	9	25.7%	18	51.43%	
Question #21	Division I and II	2	1.5%	3	2.3%	25	18.8%	102	76.69%	0.171
	Division III	1	2.9%	3	8.6%	8	22.9%	23	65.71%	

		Almost Always		Often		Sometimes		Never		p-value
Question #3	1 - 14 hour	0	0.0%	1	7.1%	9	64.3%	4	28.57%	0.269
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	1	3.0%	5	15.2%	15	45.5%	12	36.36%	
Question #5	1 - 14 hour	2	14.3%	5	35.7%	5	35.7%	2	14.29%	0.272
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	8	24.2%	5	15.2%	13	39.4%	7	21.21%	
Question #10	1 - 14 hour	0	0.0%	0	0.0%	6	42.9%	8	57.14%	0.697
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	0	0.0%	4	12.1%	14	42.4%	15	45.45%	
Question #13	1 - 14 hour	0	0.0%	4	28.6%	7	50.0%	3	21.43%	0.421
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	3	9.1%	8	24.2%	15	45.5%	7	21.21%	
Question #16	1 - 14 hour	0	0.0%	0	0.0%	7	50.0%	7	50.00%	0.447
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	0	0.0%	4	12.1%	12	36.4%	17	51.52%	
Question #17	1 - 14 hour	1	7.1%	1	7.1%	5	35.7%	7	50.00%	0.254
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	3	9.1%	5	15.2%	11	33.3%	14	42.42%	
Question #21	1 - 14 hour	0	0.0%	1	7.1%	3	21.4%	10	71.43%	0.384
	15-30	0	0.0%	10	8.3%	55	45.5%	56	46.28%	
	>31	1	3.0%	2	6.1%	9	27.3%	21	63.64%	

		Almost Always		Often		Sometimes		Never		p-value
Question #3	South	1	1.1%	9	9.6%	45	47.9%	39	41.49%	0.970
	North	0	0.0%	7	9.5%	34	45.9%	33	44.59%	
Question #5	South	12	12.8%	29	30.9%	36	38.3%	17	18.09%	0.447
	North	9	12.2%	15	20.3%	35	47.3%	15	20.27%	
Question #10	South	3	3.2%	8	8.5%	33	35.1%	50	53.19%	0.779
	North	1	1.4%	4	5.4%	29	39.2%	40	54.05%	
Question #13	South	5	5.3%	20	21.3%	43	45.7%	26	27.66%	0.540
	North	1	1.4%	15	20.3%	33	44.6%	25	33.78%	
Question #16	South	1	1.1%	6	6.4%	39	41.5%	48	51.06%	0.520
	North	0	0.0%	2	2.7%	36	48.6%	36	48.65%	
Question #17	South	7	7.4%	8	8.5%	24	25.5%	55	58.51%	0.830
	North	3	4.1%	8	10.8%	19	25.7%	44	59.46%	
Question #21	South	2	2.1%	4	4.3%	14	14.9%	74	78.72%	0.350
	North	1	1.4%	2	2.7%	19	25.7%	52	70.27%	

		Almost Always		Often		Sometimes		Never		p-value
Question #3	Graduate	1	0.7%	15	10.0%	72	48.0%	62	41.33%	0.653
	Undergraduate	0	0.0%	1	5.6%	7	38.9%	10	55.56%	
Question #5	Graduate	19	12.7%	36	24.0%	65	43.3%	30	20.00%	0.349
	Undergraduate	2	11.1%	8	44.4%	6	33.3%	2	11.11%	
Question #10	Graduate	4	2.7%	11	7.3%	55	36.7%	80	53.33%	1.000
	Undergraduate	0	0.0%	1	5.6%	7	38.9%	10	55.56%	
Question #13	Graduate	6	4.0%	32	21.3%	68	45.3%	44	29.33%	0.892
	Undergraduate	0	0.0%	3	16.7%	8	44.4%	7	38.89%	
Question #16	Graduate	1	0.7%	8	5.3%	67	44.7%	74	49.33%	0.928
	Undergraduate	0	0.0%	0	0.0%	8	44.4%	10	55.56%	
Question #17	Graduate	10	6.7%	14	9.3%	38	25.3%	88	58.67%	0.870
	Undergraduate	0	0.0%	2	11.1%	5	27.8%	11	61.11%	
Question #21	Graduate	3	2.0%	6	4.0%	31	20.7%	110	73.33%	0.652
	Undergraduate	0	0.0%	0	0.0%	2	11.1%	16	88.89%	

		Almost Always		Often		Sometimes		Never		p-value
Question #3	Yes	0	0.0%	3	8.6%	16	45.7%	16	45.71%	0.969
	No	1	0.8%	13	9.8%	63	47.4%	56	42.11%	
Question #5	Yes	4	11.4%	9	25.7%	15	42.9%	7	20.00%	1.00
	No	17	12.8%	35	26.3%	56	42.1%	25	18.80%	
Question #10	Yes	1	2.9%	2	5.7%	13	37.1%	19	54.29%	1.00
	No	3	2.3%	10	7.5%	49	36.8%	71	53.38%	
Question #13	Yes	2	5.7%	7	20.0%	17	48.6%	9	25.71%	0.778
	No	4	3.0%	28	21.1%	59	44.4%	42	31.58%	
Question #16	Yes	0	0.0%	1	2.9%	16	45.7%	18	51.43%	1.00
	No	1	0.8%	7	5.3%	59	44.4%	66	49.62%	
Question #17	Yes	2	5.7%	2	5.7%	12	34.3%	19	54.29%	0.563
	No	8	6.0%	14	10.5%	31	23.3%	80	60.15%	
Question #21	Yes	1	2.9%	1	2.9%	9	25.7%	24	68.57%	0.545
	No	2	1.5%	5	3.8%	24	18.0%	105	78.95%	

	Depression Severity and Gender				
Gender	Normal	Mild	Moderate	Severe	Extremely Severe
Female	73	22	30	11	3
	52.50%	15.80%	21.60%	7.90%	2.20%
Male	19	5	2	1	2
	65.50%	17.20%	6.90%	3.40%	6.90%
			p value = 0.168		

	Depression Severity and Level of Study				
Level of Study	Normal	Mild	Moderate	Severe	Extremely Severe
Gradute Student	82	23	29	11	5
	54.70%	15.30%	19.30%	7.30%	3.30%
Undergradute Studer	10	4	3	1	0
	55.60%	22.20%	16.70%	5.60%	0.00%
			p value = 0.951		

	Depression Severity and Institution Region				
Institute Region	Normal	Mild	Moderate	Severe	Extremely Severe
North	41	12	16	4	1
	55.40%	16.20%	21.60%	5.40%	1.40%
South	51	15	16	8	4
	54.30%	16.00%	17.00%	8.50%	4.30%
			p value = 0.745		

	Depression Severity and NCAA Division Classification				
NCAA Division Class	Normal	Mild	Moderate	Severe	Extremely Severe
NCAA Divison I and II	76	21	22	11	3
	57.10%	15.80%	16.50%	8.30%	2.30%
NCAA Division III	16	6	10	1	2
	45.70%	17.10%	28.60%	2.90%	5.70%
			p value = 0.256		

	Depression Severity and Clinical Setting				
Preceptor Setting	Normal	Mild	Moderate	Severe	Extremely Severe
High Sch	32	11	9	4	1
	56.10%	19.30%	15.80%	7.00%	1.80%
NCAA_NAI	54	15	19	7	3
	55.10%	15.30%	19.40%	7.10%	3.10%
ProRehab	2	0	1	1	0
	50.00%	0.00%	25.00%	25.00%	0.00%
			p value = 0.751		

	Depression Severity and Clincal Hours				
Clinical Hours	Normal	Mild	Moderate	Severe	Extremely Severe
1-14 hours	8	1	4	1	0
	57.10%	7.10%	28.60%	7.10%	0.00%
15-30 hours	68	23	20	7	3
	56.20%	19.00%	16.50%	5.80%	2.50%
> 31 hours	16	3	8	4	2
	48.50%	9.10%	24.20%	12.10%	6.10%
			p value = 0.459		

Appendix B.3 Anxiety Tables

		Almost Always		Often		Sometimes		Never		p-value
Question #2	NCAA	1	1.0%	16	16.3%	37	37.8%	44	44.90%	0.148
	High School	4	7.0%	16	28.1%	16	28.1%	21	36.84%	
	Pro/Rehab	0	0.0%	1	25.0%	1	25.0%	2	50.00%	
Question #4	NCAA	1	1.0%	11	11.2%	28	28.6%	58	59.18%	0.659
	High School	0	0.0%	5	8.8%	14	24.6%	38	66.67%	
	Pro/Rehab	0	0.0%	1	25.0%	0	0.0%	3	75.00%	
Question #7	NCAA	1	1.0%	7	7.1%	28	28.6%	62	63.27%	0.542
	High School	3	5.3%	6	10.5%	15	26.3%	33	57.89%	
	Pro/Rehab	0	0.0%	0	0.0%	2	50.0%	2	50.00%	
Question #9	NCAA	5	5.1%	25	25.5%	37	37.8%	31	31.63%	0.102
	High School	7	12.3%	8	14.0%	23	40.4%	19	33.33%	
	Pro/Rehab	0	0.0%	3	75.0%	1	25.0%	0	0.00%	
Question #15	NCAA	3	3.1%	12	12.2%	34	34.7%	49	50.00%	0.898
	High School	2	3.5%	6	10.5%	23	40.4%	26	45.61%	
	Pro/Rehab	0	0.0%	1	25.0%	1	25.0%	2	50.00%	
Question #19	NCAA	3	3.1%	11	11.2%	42	42.9%	42	42.86%	0.169
	High School	2	3.5%	4	7.0%	30	52.6%	21	36.84%	
	Pro/Rehab	1	25.0%	0	0.0%	0	0.0%	3	75.00%	
Question #20	NCAA	2	2.0%	13	13.3%	31	31.6%	52	53.06%	0.909
	High School	2	3.5%	7	12.3%	16	28.1%	32	56.14%	
	Pro/Rehab	0	0.0%	1	25.0%	1	25.0%	2	50.00%	

		Almost Always		Often		Sometimes		Never		p-value
Question #2	Div I and II	5	3.8%	25	18.8%	44	33.1%	59	44.36%	0.304
	Div III	0	0.0%	11	31.4%	12	34.3%	12	34.29%	
Question #4	Div I and II	1	0.8%	12	9.0%	36	27.1%	84	63.16%	0.445
	Div III	0	0.0%	6	17.1%	7	20.0%	22	62.86%	
Question #7	Div I and II	2	1.5%	9	6.8%	36	27.1%	86	64.66%	0.205
	Div III	2	5.7%	4	11.4%	11	31.4%	18	51.43%	
Question #9	Div I and II	11	8.3%	28	21.1%	52	39.1%	42	31.58%	0.829
	Div III	2	5.7%	10	28.6%	13	37.1%	10	28.57%	
Question #15	Div I and II	4	3.0%	13	9.8%	49	36.8%	67	50.38%	0.277
	Div III	1	2.9%	7	20.0%	14	40.0%	13	37.14%	
Question #19	Div I and II	5	3.8%	11	8.3%	56	42.1%	61	45.86%	0.133
	Div III	2	5.7%	5	14.3%	19	54.3%	9	25.71%	
Question #20	Div I and II	3	2.3%	17	12.8%	38	28.6%	75	56.39%	0.536
	Div III	1	2.9%	7	20.0%	11	31.4%	16	45.71%	

		Almost Always		Often		Sometimes		Never		p-value
Question #2	1 - 14 hour	1	7.1%	5	35.7%	5	35.7%	3	21.43%	0.254
	15-30	3	2.5%	22	18.2%	39	32.2%	57	47.11%	
	>31	1	3.0%	9	27.3%	12	36.4%	11	33.33%	
Question #4	1 - 14 hour	0	0.0%	2	14.3%	3	21.4%	9	64.29%	0.122
	15-30	0	0.0%	12	9.9%	27	22.3%	82	67.77%	
	>31	1	3.0%	4	12.1%	13	39.4%	15	45.45%	
Question #7	1 - 14 hour	1	7.1%	1	7.1%	6	42.9%	6	42.86%	0.186
	15-30	2	1.7%	7	5.8%	33	27.3%	79	65.29%	
	>31	1	3.0%	5	15.2%	8	24.2%	19	57.58%	
Question #9	1 - 14 hour	0	0.0%	7	50.0%	5	35.7%	2	14.29%	0.104
	15-30	10	8.3%	21	17.4%	47	38.8%	43	35.54%	
	>31	3	9.1%	10	30.3%	13	39.4%	7	21.21%	
Question #15	1 - 14 hour	0	0.0%	2	14.3%	8	57.1%	4	28.57%	0.597
	15-30	4	3.3%	13	10.7%	42	34.7%	62	51.24%	
	>31	1	3.0%	5	15.2%	13	39.4%	14	42.42%	
Question #19	1 - 14 hour	0	0.0%	3	21.4%	8	57.1%	3	21.43%	0.503
	15-30	6	5.0%	11	9.1%	51	42.1%	53	43.80%	
	>31	1	3.0%	2	6.1%	16	48.5%	14	42.42%	
Question #20	1 - 14 hour	0	0.0%	2	14.3%	7	50.0%	5	35.71%	0.132
	15-30	2	1.7%	18	14.9%	29	24.0%	72	59.50%	
	>31	2	6.1%	4	12.1%	16	48.5%	14	42.42%	

		Almost Always		Often		Sometimes		Never		p-value
Question #2	Satisfied	3	2.1%	31	21.7%	47	32.9%	62	43.36%	0.485
	Neither	0	0.0%	2	22.2%	4	44.4%	3	33.33%	
	Unsatisfied	2	12.5%	3	18.8%	5	31.3%	6	37.50%	
Question #4	Satisfied	0	0.0%	14	9.8%	38	26.6%	91	63.64%	0.244
	Neither	0	0.0%	1	11.1%	2	22.2%	6	66.67%	
	Unsatisfied	1	6.3%	3	18.8%	3	18.8%	9	56.25%	
Question #7	Satisfied	3	2.1%	11	7.7%	40	28.0%	89	62.24%	0.795
	Neither	0	0.0%	1	11.1%	2	22.2%	6	66.67%	
	Unsatisfied	1	6.3%	1	6.3%	5	31.3%	9	56.25%	
Question #9	Satisfied	9	6.3%	32	22.4%	59	41.3%	43	30.07%	0.255
	Neither	1	11.1%	3	33.3%	3	33.3%	2	22.22%	
	Unsatisfied	3	18.8%	3	18.8%	3	18.8%	7	43.75%	
Question #15	Satisfied	4	2.8%	16	11.2%	50	35.0%	73	51.05%	0.129
	Neither	0	0.0%	2	22.2%	3	33.3%	4	44.44%	
	Unsatisfied	1	6.3%	2	12.5%	10	62.5%	3	18.75%	
Question #19	Satisfied	6	4.2%	14	9.8%	63	44.1%	60	41.96%	0.798
	Neither	1	11.1%	0	0.0%	5	55.6%	3	33.33%	
	Unsatisfied	0	0.0%	2	12.5%	7	43.8%	7	43.75%	
Question #20	Satisfied	3	2.1%	20	14.0%	42	29.4%	78	54.55%	0.378
	Neither	0	0.0%	3	33.3%	1	11.1%	5	55.56%	
	Unsatisfied	1	6.3%	1	6.3%	6	37.5%	8	50.00%	

		Almost Always		Often		Sometimes		Never		p-value
Question #2	South	3	3.2%	22	23.4%	29	30.9%	40	42.55%	0.857
	North	2	2.7%	14	18.9%	27	36.5%	31	41.89%	
Question #4	South	1	1.1%	9	9.6%	23	24.5%	61	64.89%	0.886
	North	0	0.0%	9	12.2%	20	27.0%	45	60.81%	
Question #7	South	3	3.2%	9	9.6%	22	23.4%	60	63.83%	0.386
	North	1	1.4%	4	5.4%	25	33.8%	44	59.46%	
Question #9	South	10	10.6%	22	23.4%	34	36.2%	28	29.79%	0.440
	North	3	4.1%	16	21.6%	31	41.9%	24	32.43%	
Question #15	South	3	3.2%	11	11.7%	32	34.0%	48	51.06%	0.730
	North	2	2.7%	9	12.2%	31	41.9%	32	43.24%	
Question #19	South	4	4.3%	5	5.3%	42	44.7%	43	45.74%	0.194
	North	3	4.1%	11	14.9%	33	44.6%	27	36.49%	
Question #20	South	3	3.2%	9	9.6%	27	28.7%	55	58.51%	0.204
	North	1	1.4%	15	20.3%	22	29.7%	36	48.65%	

		Almost Always		Often		Sometimes		Never		p-value
Question #2	Graduate	5	3.3%	31	20.7%	50	33.3%	64	42.67%	0.869
	Undergraduate	0	0.0%	5	27.8%	6	33.3%	7	38.89%	
Question #4	Graduate	0	0.0%	15	10.0%	40	26.7%	94	62.67%	0.533
	Undergraduate	0	0.0%	3	16.7%	3	16.7%	12	66.67%	
Question #7	Graduate	4	2.7%	12	8.0%	43	28.7%	91	60.67%	0.905
	Undergraduate	0	0.0%	1	5.6%	4	22.2%	13	72.22%	
Question #9	Graduate	12	8.0%	34	22.7%	60	40.0%	44	29.33%	0.617
	Undergraduate	1	5.6%	4	22.2%	5	27.8%	8	44.44%	
Question #15	Graduate	5	3.3%	19	12.7%	56	37.3%	70	46.67%	0.877
	Undergraduate	0	0.0%	1	5.6%	7	38.9%	10	55.56%	
Question #19	Graduate	6	4.0%	15	10.0%	68	45.3%	61	40.67%	0.750
	Undergraduate	1	5.6%	1	5.6%	7	38.9%	9	50.00%	
Question #20	Graduate	3	2.0%	23	15.3%	45	30.0%	79	52.67%	0.325
	Undergraduate	1	5.6%	1	5.6%	4	22.2%	12	66.67%	

		Almost Always		Often		Sometimes		Never		p-value
Question #2	Yes	2	5.7%	9	25.7%	14	40.0%	10	28.57%	0.194
	No	3	2.3%	27	20.3%	42	31.6%	61	45.86%	
Question #4	Yes	0	0.0%	4	11.4%	10	28.6%	21	60.00%	0.877
	No	1	0.8%	14	10.5%	33	24.8%	85	63.91%	
Question #7	Yes	0	0.0%	4	11.4%	10	28.6%	21	60.00%	0.707
	No	4	3.0%	9	6.8%	37	27.8%	83	62.41%	
Question #9	Yes	3	8.6%	8	22.9%	14	40.0%	10	28.57%	0.983
	No	10	7.5%	30	22.6%	51	38.3%	42	31.58%	
Question #15	Yes	0	0.0%	5	14.3%	13	37.1%	17	48.57%	0.815
	No	5	3.8%	15	11.3%	50	37.6%	63	47.37%	
Question #19	Yes	1	2.9%	3	8.6%	20	57.1%	11	31.43%	0.420
	No	6	4.5%	13	9.8%	55	41.4%	59	44.36%	
Question #20	Yes	0	0.0%	5	14.3%	15	42.9%	15	42.86%	0.206
	No	4	3.0%	19	14.3%	34	25.6%	76	57.14%	

	Anxiety Severity and Clincal Hours				
Clinical Hours	Normal	Mild	Moderate	Severe	Extremely Severe
1-14 hours	2	3	4	2	3
	14.30%	21.40%	28.60%	14.30%	21.40%
15-30 hours	61	8	24	13	15
	50.40%	6.60%	19.80%	10.70%	12.40%
> 31 hours	10	3	9	7	4
	30.30%	9.10%	27.30%	21.20%	12.10%
			p value = 0.065		

	Anxiety Severity and Clinical Satisfaction				
Clinical Satisfcation	Normal	Mild	Moderate	Severe	Extremely Severe
Satisfied	64	13	29	20	17
	44.80%	9.10%	20.30%	14.00%	11.90%
Neither	4	0	3	0	2
	44.40%	0.00%	33.30%	0.00%	22.20%
Unsatisfied	5	1	5	2	3
	31.30%	6.30%	31.30%	12.50%	18.80%
			p value = 0.753		

	Anxiety Severity and Preceptor Setting				
Preceptor Setting	Normal	Mild	Moderate	Severe	Extremely Severe
High School	25	4	10	9	9
	43.90%	7.00%	17.50%	15.80%	15.80%
NCAA_NAI	42	9	24	13	10
	42.90%	9.20%	24.50%	13.30%	10.20%
ProRehab	2	0	1	0	1
	43.50%	8.30%	22.00%	13.10%	13.10%
			p value = 0.931		

	Anxiety Severity and NCAA Division Classification				
NCAA Division Class	Normal	Mild	Moderate	Severe	Extremely Severe
NCAA Division I and II	63	12	26	16	16
	47.40%	9.00%	19.50%	12.00%	12.00%
NCAA Division III	10	2	11	6	6
	28.60%	5.70%	31.40%	17.10%	17.10%
			p value = 0.219		

	Anxiety Severity Region of Institution				
Region	Normal	Mild	Moderate	Severe	Extremely Severe
North	27	7	20	12	8
	36.50%	9.50%	27.00%	16.20%	10.80%
South	46	7	17	10	14
	48.90%	7.40%	18.10%	10.60%	14.90%
			p value = 0.320		

	Anxiety Severity and Level of Study				
Level of Study	Normal	Mild	Moderate	Severe	Extremely Severe
Graduate Students	63	13	34	20	20
	42.00%	8.70%	22.70%	13.30%	13.30%
Undergrad Students	10	1	3	2	2
	55.60%	5.60%	16.70%	11.10%	11.10%
			p value = 0.951		

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