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The Academic Work-Life Balance of Entry-Level Athletic Training Students and Its Implications

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A thesis submitted to
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In partial fulfillment of
the requirements for the degree of
Master of Science
in
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by
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A Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science specializing in Health and Human Performance

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ABSTRACT

Athletic training students (ATS) have been documented to experience stressors and perceive burnout up to this point in their assimilation into the profession. This is understood through recent work-life balance (WLB) and burnout research within the student population, stemming off research recommendations surrounding the professional setting. However, following current educational shifts and worldwide events, prior research is limited surrounding specific graduate level ATS WLB, stressors, coping responses, and comparisons across ATS demographics. The purpose of this study is to identify this balance in graduate level students and highlight stressors or management techniques that will benefit future students pursuing athletic training education. Two hundred and seventeen ATS from CAATE accredited graduate level institutions across America completed an online questionnaire consisting of demographic information, Velociteach Questionnaire for Self-Assessing Your Work-Life Balance; The DSM-5 Self-rated Level 1 Cross-Cutting Symptom Measure; the Perceived Stress Scale; and the Coping Strategies Ranking instrument. Students in this sample rated their perceived stress as high, compared to previous surveys across ATS that gauged their perceived stress as moderate. This study validated previous literature highlighting differences across sex in the ATS population, finding that female ATS present a significantly higher (poorer) perceived mental health. Not seen in previous research, are the distinctions identified across ATS based on district classification, which suggest ATS WLB is perceived differently across NATA districts. In line with early coping measures research during the COVID-19 pandemic, participants in this study suggested they primarily prefer individualistic coping strategies to manage their stress and promote a positive WLB. These findings suggest that social coping mechanisms like socialization and mentorships should be

adapted, in line with previous ATS research, to assist in student management of perceived WLB, mental health, and stress.

CHAPTER I

INTRODUCTION

Work-life balance (WLB) is an individual's ability to meet their work and personal commitments, as well as other non-work responsibilities and activities.[1] Work-life balance should be regarded as allocating the available resources such as time, thought, and labor wisely among the elements of life. Given that an individual's life and workplace can vary simply based on job setting or age group, a WLB is very specific to each individual and their needs. In some cases, a proper WLB is not considered by employed professionals until they become aware that an imbalance exists. For young professionals or professionals new to a job setting, the establishment of WLB can begin tipped towards workplace responsibilities, even if balance is a priority, because of the drive to transition well into a new setting.[2,3] In numerous professions, this imbalance establishes a level of responsibility that pre-disposes an individual to a negative or imbalanced WLB. The effects of a negative or disproportional work-life include stress-based conflict at the workplace, dissatisfaction with life involving mental health concerns, workplace burnout, and decreased physical and mental performance.[1,4]

Looking specifically at the sports medicine healthcare realm, Athletic Training (AT) clinicians often sustain an overwhelming workload full of workplace stressors that must be balanced alongside professional and livelihood responsibilities.[6-9] On any given day, an AT could find themselves simultaneously managing multiple injuries and rehab plans, attending overlapping practices and game events, coordinating with physicians for return to play clearance, administering emergency care, educating patients, overcoming budget limitations, among a bevy of other responsibilities. Additionally, in response to the COVID-19 pandemic, many AT professionals have recently been assigned as COVID trackers for teams and schools. This

increase in workload, alongside the previously stated volume of duties, promote the common risk factors associated with burnout and poor WLB. The primary concern of a poor WLB is its association as a precursor and the strongest predictor of multiple burnout subscales, which are associated with physical, emotional, and behavioral health concerns.[7] These subscales include emotional exhaustion (EE), depersonalization (DP), and decreased perception of personal accomplishment (DPA), which are the factors that make up the psychological syndrome that is burnout.[7]

In a nationwide survey that examined almost 1000 full time ATs across various settings, it was noted that 17.2% of all respondents were in advanced stages of burnout, with those who identified as female or for those who worked in university settings being higher risk categories for burnout.[5] These distinctions coincide with original research findings which demonstrate moderate levels of coping behaviors and resiliency exhibited in ATs as management tools for their personal and professional lives, specifically noted in male ATs.[6] While it can be recognized that a gap is present in the WLB between sex in AT, current research and AT quality of life studies suggest that burnout and WLB conflicts may exist universally across that profession.

A recent systematic review published in 2020 by Oglesby et al.,[7] observed AT burnout in all subset populations of the profession (i.e. students, graduate assistants, faculty, staff, teacher). Suggested causes were work-life conflict and organizational factors such as poor salaries, long hours, and difficulties dealing with the logistics of athletic bureaucracy. The BOC (Board of Certification) of ATs has even deemed ‘work-life balance’ and ‘burnout’ as buzzwords in the profession that are associated with high burnout and increased turnover rates.[8] The National Athletic Trainer’s Association (NATA), which is the parent organization for ATs, created a Position Statement that expresses concerns about WLB in the profession while also providing

practical strategies for improvement regardless of setting. In the Position Statement, the authors state that concerns over poor WLB in AT stem from professional commitment, burnout, job satisfaction, and career longevity.[9] Specific to athletic training students (ATS), role strain and time commitments were viewed as the major factors that were perceived as burnout predictors in AT.[7] Effects of such a widespread negative balance could have implications on the quality of healthcare and education provided to patients if a proper balance is not maintained. These include callous attitudes towards patients, occupational stress that effects health and phycological wellbeing of clinicians, and emotional exhaustion in and out of the workplace.[5]

Within the student subset of AT, the Commission on Accreditation of Athletic Training Education (CAATE) has expanded the degree requirements for AT certification.[10] While entry level master's education is not new to the field, it is now the required standard for entry into the profession. Being a graduate entry level certification, additional requirements like immersive clinical experiences contribute to a large workload involving classwork and clinical requirements. While little research differentiation has been made between undergraduate and graduate entry-level populations across ATS, graduate-level ATS perspectives suggested that high-level stressors and burnout predictors resulted in higher EE and DP but lower PA similar to undergraduate students.[11] Despite the need for additional literature into the graduate ATS experience with WLB and burnout, literature still demonstrated that graduate ATS possessed increased overall stress from academic and clinical workload.[11] Across graduate ATS, overall stress was linearly associated with increased EE and DPA, which are indicators for burnout and improper WLB.[11]

Similar to how ATs can find themselves overwhelmed from a multitude of stressors; graduate students must also balance a variety of stressors as they satisfy their degree requirements. The

Student Assistance Program at John Hopkins University recognizes that students deal with a WLB, termed school-life balance[12], which also has negative implications if a positive balance is not maintained. School-life balance includes but is not limited to the following roles and responsibilities: student, partner, friend, worker, classmate, parent, participant, volunteer, intern, etc. When students struggle to balance or cope with their academic and personal responsibilities and goals, there is a documented demise in academic performance, career projection, relationships, social groups, and more.[12] However, when students achieved a positive or manageable WLB, there appears to be pre-established coping strategies, resilience, and support systems in place to ensure a positive balance is maintained.[13] These methods of management, however, are not always available or learned by a student when they enter an institution of high education.

While students are not working a professional job, this population is still juggling the responsibilities of their education alongside the demands of life. Research examining ATS has indicated that ATS also deal with a multitude of stressors related to burnout, which are all associated with a career in AT.[14] While ATS WLB related management was positively addressed through preceptor and AT educational faculty initiatives in previously studied undergraduate cohorts[15], those without a positive clinical educational experience were very likely to not see themselves continuing in the profession.[16] In addition to these research findings, literature does echo these sentiments that ATS have been battling academic WLB and burnout even before passing their BOC exams.[11,14,15] Unfortunately, the literature primarily examined WLB in ATS enrolled in undergraduate programs of study. With the CAATE mandated transition to master's level education underway, there is a need for deeper exploration of the graduate student experience.

As updated CAATE standards for Athletic Training Education have merged to meet 2022 requirements, students may not be aware or equipped to maintain the positive balance necessary for future job satisfaction and success. Suggested by the Position Statement on WLB in AT, WLB fulfillment is associated with how an individual can manage the multiple roles they find themselves in.[9] Whether it be AT specific (clinical responsibilities), organizational responsibilities, or lifestyle responsibilities, individuals need to develop professional and personal strategies to aid in the attenuation of a positive WLB.[9] Therefore, the purpose of this study is to identify the perceived WLB of graduate level students and highlight stressors or management techniques that will benefit future students pursuing AT education. The proposed implications of this study suggest that if students are not able to function within a positive balance, educational outcomes alongside future practice could be diminished. However, if identified, educational programs could establish or encourage interventions to assist with balance management. The research aims of this study will be to 1) Collect descriptive data regarding the current academic work-life balance of entry level ATS, along with the impact it has on educational outcomes through self-reported GPA, skill set confidence, and work-life balance questioning. 2) Identify stressors of graduate level ATS associated with school requirements and stressors associated with livelihood. 3) Identify coping mechanisms and management techniques used by students to address their stressors. 4) Rate the perceived impact of stressors on life and the perceived impact of coping techniques on stress management.

CHAPTER II

LITERATURE REVIEW

Work-life balance (WLB) research is vast among healthcare and athletic training, spanning professional and academic settings, because of the implications WLB presents for burnout and retention. This volume of research and subsequent outcomes has been significant to the perceptions and current practices of athletic training, culminating in a position statement from the National Athletic Trainers Association (NATA) in 2018.[9] Therefore, it is important to discuss burnout, WLB, and coping strategies across the profession and academic sphere of Athletic Training in line with new academic requirements from the Commission on Accreditation of Athletic Training Education (CAATE). The purpose of this literature review is to detail and identify the status of work-life balance, mental health, burnout, perceived stress, and coping strategies used by athletic training professionals and athletic training students (ATS). With this understanding, previous research recommendations will be used to make WLB recommendations for ATS and suggestions for incorporating education about WLB into athletic training curriculums.

Work-Life Balance and Burnout

Work-life balance is not a foreign term in today's world; however, it remains to be a difficult achievement. While its roots span back to the 1800s, WLB was brought to the forefront of American culture during the Women's Liberation Movement of the 1980s.[3,17] During a time where flexibility in the work schedule and maternity leave were prioritized to accommodate women in the workforce, this concept soon expanded to encompass a generalized desire for improved flexibility and satisfaction between work and home responsibilities.[3,17] Today, authors like Raja & Stein[17] quote WLB to be a multimillion-dollar industry affecting professionals across

diverse employment settings. A simple definition of the term given by Sturges & Guest,[3] characterized work-life balance as work satisfaction as well as good functioning at work and home with minimal role conflict. Despite this definition, the authors further detail how newly graduated students may create a poor environment for a work-life balance. Across their 150 sampled respondents, it was noted that newly graduated employees were drawn to situations where long hours are expected and easily sacrificed in a trade-off for increased work involvement and a demonstration of company commitment.[3] This is commonly documented across research, to the detriment of not only quality of work, but also sleep quality, work-family conflict, and mental fatigue.[18,19] More specific to healthcare, universally shared conditions include long work hours, attention to patient care needs, administrative tasks, student supervision, and more.[9] These conditions have been consistently linked to reduced WLB and job dissatisfaction across professions like nursing, occupational and physical therapists, physicians, and ATs.[9] While job responsibilities differ across healthcare occupations, these adjacent professions can provide insight into the effect poor WLB is having on ATs. In a study looking specifically at surgical physicians, it was suggested that only 36% of surgeons feel their schedule creates enough time for personal and family life, while 51% of all the physician's sampled stated that they would not recommend their offspring pursue a similar field of employment.[17] Similarly, in a systematic review examining over 83 samples of AT professionals, ATs were found to have parallel experiences with their perceived WLB.[7] There findings suggested 49% of all participants reported role strain and 39.8% reported feelings of burnout.[7] While research in the field of WLB has demonstrated individual differences in the WLB process that should be accounted for, poor WLB is still universal across healthcare and non-healthcare professions.[1]

The significance of a poor WLB has been described in correlation with its negative outcomes; however, the primary concern of a poor WLB is its association as a precursor and the strongest predictor of multiple burnout subscales.[20] These subscales include emotional exhaustion (EE), depersonalization (DP), and decreased perception of personal accomplishment (DPA), which are the factors that make up the psychological syndrome that is burnout. Individuals suffering from burnout have been shown to experience low-level job satisfaction, cynical attitudes, mental weariness, poor physical and meatal health, and reduced personal efficacy.[5,7] This is important to highlight because it is a byproduct of poor WLB and physiological stress that results from an imbalance across an individual's demands, roles, conflicts, and coping strategies.[20] The issue at hand with burnout, is its linear relationship documented alongside health-related variables (physical and mental health) and its effect on turnover.[9] Though more research is suggested into this correlation, in groups who have diminished levels of physical activity or adequate nutritional habits, increased work-life conflict and perceived burnout is documented.[9] While burnout may present similar outcomes to poor WLB in the form of job dissatisfaction and decreased work quality, burnout has also been linked to adverse behaviors like increased substance use and more reporting of mental health disorders like mood disorders and depression.[5,7] Furthermore, several authors have detailed the increasing prevalence of burnout through surveys of burnout subscales across human service providers in healthcare or medical roles.[5,7] This is an increasing issue because, as documented in those same manuscripts, the increase in occupational stress and burnout symptoms (EE, DP, and DPA) include a shift towards callous attitudes directed at patients, expressed exhaustion in the workplace, and decreased quality of patient care.[5,7] These are outcomes are never desired but instead developed through poor WLB.

Work-Life Balance in Athletic Training

Athletic Trainers (ATs) are health care professionals who specialize in six domains of practice and apply those domains across a multitude of healthcare settings. These domains include prevention, clinical evaluation and diagnosis, immediate care, treatment and rehabilitation, organization and administration, and professional responsibility.[21] As of 2022, the job settings employing ATs have been broken down by the NATA as follows: 19% in college/university, 18% secondary schools, 17% clinics and hospitals, 27% are students, 2% in professional sports, and 2% in emerging settings.[22] As ATs continue to expand into various settings where they provide worth and value as healthcare professionals, interprofessional struggles like poor salaries, long hours, lack of respect and appreciation, and more have all been identified as perceived barriers when examining the work-life balance in this population.[7,9] These struggles have informed literature across the AT profession, through the use of burnout subscales. In two nationwide surveys focused on burnout in the professions, burnout syndrome was quantified via MBI (Maslach Burnout Inventory) and the three rated burnout subscales DP, DPA, and EE, presenting results that suggest a change in burnout trends across the professions.[5,20] While previous literature suggested that EE and DP were low across AT compared to other healthcare professions,[20] current systematic reviews suggest that physical, emotional, and behavioral concerns stemming from increased burnout subscales (EE, DP, and DPA) are contributing to recent turnover and attrition across the profession.[5] Because of the aforementioned issues facing the profession, along with the mounting research surrounding burnout and poor WLB in the profession,[5,7] the NATA released a position statement in 2018 titled *Facilitating Work-Life Balance in Athletic Training Practice Settings*.[9] In this position statement, the NATA sought to promote a positive WLB in the profession by examining the barriers that exist among its

members so that workplace strategies and recommendations could be made. The barriers discussed were based on multilevel factors that span an individual's perceptions about their life across sociocultural factors, individual factors, and organizational or structural factors.[23,24] The sociocultural factors included gender ideology and cultural norms or expectations. The individual factors included personality, gender, sex, and practice settings. The organizational or structural factors include job demands, role strain, conflict, overload, autonomy, flexibility, advancement, lack of value, and compensation. In a systematic review of AT burnout conducted by Oglesby, Gallucci, & Wynveen,[7] it was suggested that the growth of burnout across the profession has resulted in physical, emotional, and behavioral concern. As further explained by these authors, the significance of this outcome is found in the correlation burnout has with turnover or poor retention of clinicians in the profession.[7] At worst, an experimental research study outlined the alarming increase of ATs utilizing poor coping mechanisms like substances (alcohol, tobacco, and marijuana) to address their burnout.[25] In an investigative study examining substance use in ATs, it was found that 46% of collegiate ATs were engaging in a binge-drinking episode over the past month, with EE and DPA quoted as burnout subscales heavily associated with the episode.[25]

Previous research highlighted the differences across the AT profession when considering WLB.[5,7,9,20] Though WLB is a common issue stemming from problems faced by clinicians universally, literature outlined the impact of individual differences in worker characteristics and specificity on perceived WLB.[1] Across the profession, variables like age, family, sex, personality, setting, and parental status are a few examples of variables that can alter job satisfaction and WLB.[9,7,23,24] These differences exist within the multilevel factors discussed in the NATA WLB position statement and present themselves as demographic or individual

differences. This is not suggesting that issues like role conflict, ambiguity, job demands, lack of perceived value, lack of promotion or achievement, and more are not crucial to the decline in AT WLB,[1,3,5,7,9,18,19] because they are; however, some groups within the AT population manage stressors that are not shared across the body of ATs. These groups include female ATs, minority groups, and ATs in collegiate work settings. In an interview study conducted by Mazerolle, Borland, & Burton,[26] barriers to entry, gender bias, and discrimination were discussed as stressors facing young female ATs across the landscape of college athletes. This was expressed through a perceived lack of respect and investment in females ATs who were also juggling work-family conflicts, workplace responsibilities, role perceptions, and parenthood.[27,28] With the addition of stressors experienced by female ATs, it is not unlikely to see research outcomes that suggest WLB differs across gender. In a separate study by Mazerolle, Eason, & Goodman,[6] WLB was quantified through the use of self-rated resiliency, hardiness, and affectivity polls. In their results, it was found that ATs who rated their hardiness, resiliency, and positivity higher, had lower work-life conflict scores indicating a more positive WLB. However, in this study, females self-scored their resiliency lower across questioning, which is consistent with current research findings that suggest that gender differences do have implications on WLB.[6] Additionally, in a profession-wide systematic review of AT burnout, it was noted that female ATs experience a greater burnout rate than male AT which caused them to depart from the profession almost 20 years earlier than men.[5] This review contributed this sex-specific statistic to work-family conflict arising from marriage and parenthood responsibilities.

Beyond gender differences, several articles highlighted that employment and leadership in sports settings are predominantly held by Caucasian males, representing 84% of Head AT roles while Black ATs make up 3.4% of Head ATs and 4.6% of assistant ATs.[6,29,30] While not studied in

depth across athletic training, journals like the *Human Resource Development Review* have outlined that a lack of representation for minority groups can lead to performance feedback that is fraught with bias against minority groups, loss of opportunity or upward mobility for deserving minority employees, and a lack of perceived acceptance.[31] These possible roadblocks compounded with the stressors commonly experienced across athletic training, add to the effect individual demographics play on WLB stressors. Finally, the NATA position statement on WLB has explored the type of clinical setting as a factor that contributes to perceived WLB, adding to the pool of literature that suggests demographics compounding the effect of perceived WLB. Division I historically has been the primary institution-level surveyed for WLB and retention data because of the demands presented by the setting and the lack of a true off-season.[9] While the position statement expressed that individuals in the DI collegiate setting portrayed a successful WLB,[9] there was also an agreeance with concurrent research that work-family conflict is still prevalent,[9,26,28] which is a large stressor that contributes to negative WLB.[17,18] Despite the depth of research into other National Collegiate Athletic Association (NCAA) division classifications, a literature review by Gallucci and Peterson,[32] is the primary source that detailed differences among these classifications. As a part of their take-aways, it was found that Division I institutions provided increased rates of staffing, size, scope, and satisfaction with facilities that were not incrementally or even linearly distributed across other classifications.[32] Furthermore, it was discussed that many institutions were providing care to a comparable number of student-athletes across division classifications while not having the resources or staff members (full or part time) to ensure comparable care. Despite findings that resources decreased in a linear fashion to the descending division, levels of decremental satisfaction were not linear in a decrease in division and resources.[32] Instead, it was suggested that ATs at DII NCAA institutions

scored the lowest across the facility satisfactorily survey items.[32] Job dissatisfaction, alongside work hours, team schedule, job demands, and workload,[9,33] remain indicators for burnout and poor WLB in the AT population, however, current data from the NATA suggests that NCAA division does not affect an individual's job satisfaction or intention to leave the profession.[9] Despite these findings, future research across NCAA division classifications have been recommended to validate or refute the current body of literature that commonly reflects WLB and WLB predictors in the Division I AT,[33] despite their being noted differences in resources, staffing, and workload across these classifications.[32]

Work-Life Balance among Athletic Training Students

For any persons that aspires to become an AT, they must graduate from a CAATE accredited educational program and pass the Board of Certification (BOC) exam.[10] After educational programs and a passing score on the BOC, most states require additional credential and licensure to practice in-state. A new standard for AT education will now be enforced that prevents CAATE accredited programs from admitting, enrolling, or matriculating baccalaureate level students.[10] This shift does not create a novel master's degree in athletic training, since the entry-level master's degree has existed since the early 1990s and has been studied before in their relationship to BOC outcomes,[34,35] but it does elevate the profession to meet the work produced by the NATA Executive Committee for Education (ECE).[10] Based on agreement from all pillars of the NATA Strategic Alliance (BOC, CAATE, NATA, NATA Foundation), AT education was updated to promote growth, future, and longevity of the profession.[10] This shift in the AT education landscape establishes an entry-level master's degree as the standard of education in order for students to sit for the BOC exam and to receive credentialing.

Traditionally, studies that examined WLB, burnout, or life stressors across the profession primarily focused on AT professionals. Around 2001, researchers in AT started to dissect all the research that had been done surrounding AT professionals and burnout but not ATS, highlighting that upwards of 40% of all ATs (professional and student) were suffering from burnout and depression.[36] In their background dissemination, life stressors or chronic distress from events like extensive time commitment, low salary, limited opportunity for career advancement, poor working conditions, job dissatisfaction, and co-worker conflicts[36,37] were all listed and later validated[1,3,5,7,9,18,19] as stressors that promote poor WLB or serve as burnout predictors. Across various settings where AT's practice, thousands of ATS provide supervised care to student-athletes daily across their CAATE accredited clinical sites and internship locations.[36] As ATS balance their clinical development and responsibilities, they also experience similar stressors compared to traditional college students. Students across higher education have been found to perceive their academic life as stressful and demanding, resulting in cognitive and emotional reactions.[36] Furthermore, in a survey of generalized college students, 42.5% reported moderate levels of perceived stress, whereas 27% reported stress levels beyond what they feel is self-manageable.[37] For many college students, their academic stress is compounded by life adjustments like financial pressures, lack of familiar social support, and more that are expressed as low self-esteem, little optimism, and low self-efficacy across more than half of sampled populations.[37,38] With emerging research of college students and their relationship with burnout or stressors,[38] as well as with a plethora of literature surrounding burnout among AT professionals, researchers shifted their focus towards the sparse equivalent of research in ATS subpopulations. In an effort to examine how clinical obligations and generalized college stressors overlap and present in ATS, a survey-based prospective study was conducted in 2011 that

investigated burnout experiences, burnout contributions, and burnout perspectives of ATS.[14] In their findings, a majority of the students interviewed stated that they have perceived burnout thus far in the profession, and that they expect a career in athletic training to present the potential for further burnout.[14] This perceived burnout was primarily observed among preceptors within the AT profession, however, some students did report personal experiences with burnout in their settings.[14] These outcomes were associated with a student response that indicated role strain and time constraints as primary factors leading to burnout,[14] which as commonly seen across professional AT responses,[1,5,7,9,18,19] and are validated by current systematic reviews that continue to highlight burnout across ATS.[7]

While ATS are not certified to perform the duties of ATs, there is a mirroring of responsibility, stressors, and more seen across the ATS subgroup of athletic training. This can best be seen in the NATA position statement on WLB.[9] Though a student section is not allocated, it is understood that students face similar challenges and/or have similar perceptions to their preceptors and mentors. Literature examining the ATS experience highlighted a concept termed professional socialization (PS) or socialization to explain this phenomenon.[15,16] In their studies, PS is a process where an ATS is educated and introduced to the role and responsibilities of an AT. This is a 3-phrase process, that allows the ATS to shape and develop a perception of the profession.[15] These three phases are viewed as 1) recruitment, 2) professional or anticipatory, or 3) organizational.[15] While PS will be discussed in length regarding coping strategies literature, exposure and socialization aspects should not be overlooked for their effect on negative perceptions of the profession. These negative perceptions of the profession have been described as long hours and scheduling, low salary, and family conflict issues.[16] Across these studies, there remains a marked connection between burnout and retention, even to the point where the number

of hours worked could serve as a precursor to that prevents ATS transition to practice.[14] This sentiment was later challenged and disputed in an original research study that surveyed undergraduate ATS for their perceptions on burnout and WLB.[39] While this background was understood, socialization aspects like mentorship were also crucial to the study design. In their findings, Barrett et al.[39] identified that while senior ATS had experienced burnout, perceived burnout in their preceptors/professors, and acknowledged that a work-life imbalance will be a professional struggle, socialization also taught ATS WLB strategies that provided hope and resolve that a proper WLB could be achieved.

As literature has sought to fill the void of burnout and WLB research regarding the ATS experience, current educational shifts have created distinctions in the level of higher education among ATS. Despite educational shifts,[10] a few research studies exist to depict the difference, if any, between undergraduate and graduate ATS.[11,39,40] In an original research study of both undergraduate and graduate ATS, utilizing the Maslach Burnout Inventory (MBI) was used for qualitative comparison, both groups of ATS reported higher burnout scores compared to previous studies of ATS groups.[11] Other important outcomes indicated that undergraduate students had higher levels of the burnout subscales EE and DP, suggesting that the shift to an entry-level master's may be beneficial for ATS retention. The authors also estimated that around 69% of athletic training programs were bachelor programs at the time of this survey.[11] In slight comparison, original research solely focused on graduate-level ATS suggested that high-level stressors and burnout predictors were more a result of DPA.[40] In the conclusions of both articles, it was recommended that future research be conducted to validate these findings while taking into account factors such as specific year, gender, and more.[11,40] Burnout and WLB research have been inclusive of demographic information within the profession of AT, with examples

seen across sex,[6,26-28] and ethnical backgrounds.[6,29,30] However, these same topics have a lack of existing literature among the ATS population, allowing no room for comparison or validation of these outcomes beyond a perception-based article that survey parenthood perceptions and their possible effect on professional retention.[41] Beyond gender demographic, clinical setting-based demographics were also points of emphasis in the NATA position statement on WLB.[9] In a comparison study between graduate and undergraduate ATS, it was found that NCAA division was predictive of increased burnout scores, with students at NCAA DII or DIII affiliations having decreased burnout scores compared to students at DI affiliate universities.[11] While this finding was not synonymous with outcomes in the professional field, which suggested lower satisfaction and WLB in smaller NCAA divisions,[32] this does serve as a precedent for ATS burnout information across demographics like work setting. While undergraduate and graduate students all reported elevated levels of EE and DP, students enrolled in non-Division I institutions and in undergraduate programs presented lower EE scores.[11,32] This study suggested that an increase in stressors like marriage, clinical hours, and social stress among students increased DP.[11] Furthermore, graduate ATS and females reported increased stress levels leading to increased EE and DP compared to their peers.[11] In conjunction with finding across ATS demographics for WLB and burnout, there have been several recommendations for the incorporation of coping strategies to negate and develop stress management techniques in ATS that affect stressors.[10,11,14,16,20,40] As the research community was beginning to pursue literature to identify and make recommendations for coping mechanisms among ATS, the world embarked on its first worldwide pandemic in almost a century.

COVID-19 Pandemic and ATS

In December 2019, COVID-19 medically known as severe acute respiratory syndrome coronavirus 2,[42] became recognized as a growing national threat to public safety. As the virus remained unknown in terms of mortality, worldwide leaders mandated entire countries to lock down in an attempt to prevent the spread of infection. This lockdown came into effect in March 2020 in the US, shutting down businesses, schools, and requiring many people to work from home. During this time, ATs showed resiliency and adaptability as health care professionals in the event of a crisis, but it also created uncertainty, fears, and mental health concerns stemming from job status, finances, and more.[43] More specific to the student populations, medical students were surveyed during the pandemic, exploring effects on burnout and mental health (MH).[44] Outcomes included MH deterioration and increases in depression, increased cynicism, increased EE, and a report that 1 in 5 students were struggling with burnout.[44] When examining the ATS pandemic experience, research focused more on the student's ability to cope and manage stress opposed to examining differences in burnout, stress, MH, or WLB.[45] Through the interaction with responses during the pandemic, there was a noticeable increase in the prevalence of burnout with a form of mental health disorder or symptom. Recent literature findings suggested that identifying individuals at risk for burnout, or those who are currently experiencing burnout may be an important step in preventing anxiety and depression in individuals, since current research suggests burnout has a complicated relationship with depression and anxiety.[40] This is a significant statement since research suggests that around 90% of college students experienced negative mental health symptoms during the COVID-19 pandemic.[45] Not to be overlooked, however, is the research from the psychological community that disagrees on the strength of association between burnout, depression, and anxiety.[46] For ATS specific populations before

COVID, reported outcomes for their 204 ATS participants including moderate stress and risk for clinical depression in 1/3 of the sampled population.[47] Comparable outcomes have yet to be published regarding stress and MH during or after the pandemic. Furthermore, no gender differences were identified in this study across ATS MH.[47] In association with the COVID-19 pandemic, was the development and incorporation of coping strategies to manage inflated levels of stress.[47,48] Examples of pandemic-related coping mechanisms included strict personal protective measures (90%), avoiding public gatherings (80%), and personal coping strategies like gaming, religious devotion, social media, communication, and individual relaxation techniques.[48] These individual relaxation techniques included meditation, physical activity like exercise or sports, music, and more. This development in utilization is important because positive coping strategies have been described as pivotal in decreasing stress and depressive symptoms in students and ATS.[47] As explored throughout the pandemic, and as literature in ATS WLB is seeing, positive coping strategies can lead to a healthier lifestyle and longevity in the profession.[9,44-47]

Coping Strategies

The universally acknowledged method for promoting a positive balance in work-life or work-conflict situations is through the incorporation of appropriate coping strategies. Coping strategies are a part of the pendulum that serve as a positive WLB predictor, opposed to negative WLB predictors like occupational stress (anxiety, frustration, anger, etc.)[5] that result from job demands, role strain, long hours, and more.[9] The NATA WLB position statement provided workplace strategy recommendations or encouraged coping strategies to assist its members. These recommendations are given for ATs in all work settings, and they are broken into three sections: practices for supervisors or administrators, practices for individuals, and non-workplace

recommendations. Section one provides direction for writing neutral policy, communicating effectivity, workload analysis, job sharing, mentorship programming, social and emotional support, recognition and achievement awards, and advocation for larger salaries.[9] Section two provides encouragement to set boundaries, prioritize obligations, create goals, and negotiate roles for individual practices.[9] Section three shares non-workplace tips like disengagement, creation of social networks, separation of roles from work to life, and more.[9] These recommendations address the commonly stated stressors that lead to WLB or work-family conflicts. Those stressors include role conflict, ambiguity, job demands, lack of perceived value, lack of promotion or achievement, and more.[1,3,5,7,9,18,19]

For ATS populations, these WLB position statement recommendations should be considered as a means to assist with the transition to practice, if possible. Students, however, face a different set of stressors than simply those mirrored from their preceptors and professors. Students in higher education deal with emotional stress such as anxiety and academic stress related to workload, preference pressure, time management, and more.[49] Upon graduating, ATS have likely already experienced burnout, are aware of its presence in the profession, and acknowledged there could be some difficulty in raising a family while working as an athletic trainer.[39] However, the successful WLB strategies that ATS observed in their preceptors gave them hope and had more weight over their perceptions.[39] This group of students indicated that the behaviors modeled by their preceptors gave them hope for the future and showed them specific coping strategies to use. Those behaviors include clear communication, helpful co-workers, and healthy work relationships. In literature specific to student burnout, a chart of recommendations was created for reducing burnout in ATS, targeting the educational program and the student.[14] Leading up to this resource, it was detailed that primary sources of burnout in ATS were rooted in role strain

and time, whereas the primary method of coping and management were personal time and social support.[14] This chart echoed recommendations on the education of burnout and stress management techniques, while encouraging communication, mentorship, and self-responsibility tasks. Within similar burnout specific research, the Oglesby et al. stated,

> "Coping strategies used by ATSs to manage their clinical and academic responsibilities were also addressed by authors of a single qualitative study. Students not only used support networks both inside and outside their athletic training programs but also relied on physical outlets (eg, sleep and exercise) and time-management skills (eg, making lists or keeping organized datebooks)."[5p.426]

Those specific modes of coping were a mix between the current recommendations and strategies seen across students and in the profession which include social support networks, and then physical outlets like sleep and exercise which have yet to be listed as coping strategies until this point. These implementations most likely stem from the previous years of COVID-19 pandemic and lockdown initiatives, where individuals were homebound for a majority of their time while also in an elevated burnout and MH state.[44-46] During this time, multiple media outlets were promoting the use of self-help or evidence-based practice interventions like physical activity and rest to combat mental health and burnout symptoms. Physical activity is considered via systematic review to be an effective medium for the reduction of burnout,[51,52] and poor sleep contributes to burnout.[52] An emphasis on coping mechanisms was developed and focused on by ATS to manage the stress of the pandemic and unknown academic world.[45] These include understanding the importance of adaptability and flexibility, empathy for self and others, and stress management through means of exercise and disengagement.[45] Lastly, it was noted that women had greater levels of financial stress and more instances of self-punishment as a coping strategy. This was consistent with previous research that suggests women represent a higher level

of overall stress, while being more likely to lean towards an emotionally focused coping responses opposed to problem-solving responses.[50]

Certified athletic trainers should promote primary prevention strategies that help student athletic trainers cope effectively with anticipated life stress and should provide a holistic approach to assisting student athletic trainers in times of need.[36] Since then, numerous studies have examined and recommended professional socialization as a primary means to accomplish such outcomes. The socialization framework has gained popularity recently and has been utilized to investigate career choice, student retention, and educational and workplace preparation.[14] This concept originated from the familiarity and recommendations surrounding the use of support groups, whereas many ATS social support structures are significantly represented as family (91.5%), or peer non-ATS (63.7%). As suggested in previous research, ATS who indicated higher social support also reported positive physical and mental wellbeing, MH, and perceived stress.[46,47] Since socialization does function as a mentorship more often than not, these experiences can negative perception aspects like long hours, low salary, and family conflict issues, while also creating positive aspects like the future of the profession, the dynamism of the profession, professional enthusiasm to work, and more.[16] Ultimately, the goal of socialization is to promote ATS professional retention and satisfaction, role model, and mentorship.[9,53]

Conclusion

Through examination of the literature surrounding WLB, burnout, PS, and MH of AT and ATS, this literature review has demonstrated a need for ATS research across demographic differences and utilized coping strategies. Across literature conducted on the AT profession, the NATA position statement on WLB and subsequent literature have demonstrated a commonality in stressors shared by ATs like long hours, poor salary, and poor appreciation.[5,9,20] However,

despite these shared issues that contribute to burnout and poor WLB, demographic factors like sex,[5,6,26,27,28] ethnicity,[6,29,30,31] and NCAA division classifications[7,26,28,32,33] were all associated with elevated stressors and barriers to proper WLB in addition to stressors shared across the profession. In the ATS population, WLB literature is progressing to the depth of that in the professional world, with several studies showing the positive and negative perceptions held by students about the profession.[5,14,15,36-39] However, unlike the body of literature surrounding the profession, only NCAA division demographics have been explored among ATS, showing a predictive measure between division status and perceived burnout.[11] While recommendations have been made in previous research for the examination of demographics like program year, sex, and ethnicity,[11,40] these recommendations have not yet been met. Furthermore, when discussing stressors, WLB, or burnout, it is important to identify coping strategies since they provide the balancing effect in a WLB.[7,9,20] While ATS can incorporate coping recommendations provided in the NATA position statement on WLB to professionals,[9] there are differences between the stressors and roles experienced by a student versus a professional.[14,36-38] Previous coping strategies employed and recommended to ATS include communication, mentorship, self-responsibility tasks, and professional socialization.[14,16] While these strategies may still be appropriate for recommendations, the current COVID-19 pandemic has shifted the emphasis and application of coping strategies across student populations.[47,48] In addition to self-health strategies employed to prevent the spread of COVID-19 and quell the fears associated with the virus, individualistic coping strategies like physical activity, medication, and music were outlets used by students to manage educational related stress.[48] Literature has not yet shown whether these recently adopted coping strategies will carry over into ATS management of academic and

clinical workload stressors, or whether a student should revert to previous social structure recommendations.[9,14,36,44-46,53]

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CHAPTER III
MANUSCRIPT

INTRODUCTION

Work-life balance (WLB) is an individual's ability to meet their work and personal commitments, as well as other non-work responsibilities and activities.[1] A proper WLB is recognized when the consequence of an imbalance begins to arise. For young professionals or professionals new to a job setting, the foundation of WLB can develop poorly, even if balance is a priority. This is because the drive to transition well into a new setting has been shown to result in personal compromise for early professional success at the detriment of future longevity and mental health.[2,3] In numerous professions, this unbalanced role establishes a level of responsibility that predisposes an individual to a negative or imbalanced WLB. Explored across healthcare professions like nursing, occupational and physical therapists, physicians, and ATs, universally shared conditions like long work hours, attention to patient care needs, administrative tasks, student supervision, and more have been consistently linked to reduced WLB and job dissatisfaction.[4,5] The effects of a negative or imbalanced work-life include stress-based conflict at the workplace, dissatisfaction with life involving mental health concerns, workplace burnout, and decreased physical and mental performance.[1,6]

In a nationwide survey that examined full time Athletic Trainers (ATs) across various settings, it was noted that 17.2% of all respondents were in advanced stages of burnout, with those who identified as female or for those who worked in university settings being higher risk categories for burnout.[7] These distinctions coincide with original research findings which demonstrate moderate levels of coping behaviors and resiliency exhibited in ATs as management tools for their personal and professional lives.[8] A recent systematic review published in 2020 by Oglesby

et al.,[9] observed AT burnout in all subset populations of the profession (i.e. students, graduate assistants, faculty, staff, teacher). Suggested causes were work-life conflict and organizational factors such as poor salaries, long hours, and difficulties dealing with the logistics of athletic bureaucracy. The BOC (Board of Certification) has even deemed 'work-life balance' and 'burnout' as buzzwords in the profession that are associated with high burnout and increased turnover rates.[10] The National Athletic Trainer's Association (NATA), which is the parent organization for ATs, has created a Position Statement that expresses concerns about WLB in the profession while also providing practical strategies for improvement regardless of setting. In the Position Statement, the authors state that concerns over poor WLB in Athletic Training stem from professional commitment, burnout, job satisfaction, and career longevity.[4]

Similar to the findings and subsequent recommendations made in the NATA position statement on WLB, research geared towards the student population of athletic training has presented various perspectives mirroring the profession. In surveys of undergraduate athletic training students (ATS) participants all gave similar responses that indicated a feeling of burnout sourced in role strain and time constrains. Conversely, it was examined the coping mechanisms used to address the prevalence of documented burnout included personal time and social support.[11] Across multiple surveys, the implications of professional socialization have also been suggested, implying that professor and preceptor WLB and stress management are learned through mentorship, whether positive or negative strateges.[12-15]

Within the student subset of athletic training, the Commission on Accreditation of Athletic Training Education (CAATE)[16] has expanded degree requirements for AT certification towards

an entry-level graduate education. Similar to how ATs can find themselves overwhelmed from a multitude of stressors, graduate students must also balance a variety of stressors as they satisfy their degree requirements. The Student Assistance Program at John Hopkins University recognizes that students deal with a WLB, termed by the university as "school-life balance,"[17] which also has negative implications if a positive balance is not maintained. School-life balance is homogenous with academic work-life balance, with this operational term being recently applied to encompass persons in the academic sphere of higher education.[18] When students struggle to balance or cope with their academic and personal responsibilities and goals, there is a documented demise in academic performance, career projection and satisfaction, organizational commitment, social interaction, and more.[17-19]

Since poor work-life balance has been periodically linked to the development of burnout,[1-3,7,8,18] surfacing as emotional exhaustion, depersonalization, and diminished personal accomplishment,[9,21,22] surveys of mental health and coping strategies have routinely been incorporated into WLB testing across AT and ATS groups. However, a lack of literature exists when exploring ATS descriptive or demographic information like gender differences, ethnic differences, regional differences, academic classification, among other identifiers that distinguish students personal and social ability to manage workloads and stress.[7,8,15,21,23-25]

A backdrop to this examination of WLB, is the ongoing COVID-19 pandemic. Recent publications surveying ATS and non-AT student groups have identified pandemic related effects to WLB, mental health, burnout, and perceived stress in these groups.[25,26] Previous research has suggested an overlap in the concurrence of poor WLB alongside burnout predictors, poor mental

health (MH), and prolonged stress.[20,22,23] Because of their documented overlap, consideration will be given to their inclusion and effect associated with how the pandemic is negatively affecting all of these variables in student healthcare populations.

As updated CAATE standards for Athletic Training Education have merged to meet 2022 requirements,[16] students may not be aware or equipped to maintain the positive balance necessary for future job satisfaction and success. Research is vast concerning the professional sphere of AT through the examination of stressors, work-family conflicts, coping, and demographics differences;[4,7-9,14] however, research has yet to explore these same variables among graduate ATS. Research suggests that when students achieved a positive or manageable WLB, success is attributed to pre-established coping strategies, resilience, and support systems that ensure a positive balance is maintained.[19] These methods of management, however, are not always available or learned by a student when they enter an institution of high education. Therefore, the purpose of this study is to identify this balance in graduate level students and highlight stressors or management techniques that will benefit future students pursuing athletic training education. The proposed implications of this study suggest that if students are not able to function within a positive balance, educational outcomes alongside future practice could be diminished. The findings of this study should allow educational programs to establish or encourage interventions that assist with balance management. The research aims of this study were: 1) Collect descriptive data regarding the current academic WLB of entry level athletic training students, along with the impact it has on educational outcomes through work-life balance questioning. 2) Identify differences in self scored WLB, mental health, and perceived stress across demographic classifications. 3) Identify coping mechanisms and management

techniques used by students to address their stressors. 4) Provide recommendations for the WLB and management of stress in ATS.

METHODS

Participants

A total of 217 professional graduate ATS enrolled in CAATE accredited Athletic Training Programs (ATP) participated in the study survey, with 193 surveys completed. Inclusionary criteria mandated that all participants be entry-level graduate students engaging in both didactic and clinical experiences. Undergraduate students and Pre-Athletic Training students were excluded from participation in the study. The survey was piloted with two students meeting the inclusion criteria. Based on the pilot feedback, revisions to the survey were made respective to survey flow, language clarity, and estimated time requirements, and thus, the pilot data was not included in the final analysis. A majority of the participants were female (77%), Caucasian (69%), from Division I institutions (63%), completing their first programmatic year (64%). (See Table 1) Participant demographics aligned with majority representation in the profession across sex (female 55%) and Caucasian (79.8%).[16]

Procedures

Entry-level graduate ATS were recruited to participate in the study through initial contact letters disseminated via email to Program Directors (PDs) of CAATE accredited ATPs. The initial contact emails sent to the PDs included background information regarding the study, an informed consent document for participants, a virtual recruitment flyer for the study with PI contact information, and a direct link to participate in the anonymous electronic survey. All contacted

PDs were requested to share the study information and survey link with their respective student populations. The Qualtrics based survey consisted of a series of initial demographic questions, followed by validated sampling measures for the purpose of identifying Work-Life-Balance (WLB), Mental Health (MH), Perceived Stress (PS), and Coping Responses. The study survey was created using components of various survey instruments that have been previously validated and implemented. A pilot study found the survey to be both reliable and valid prior to implementation. Follow-up emails were sent to PDs at ten-days post initial contact in order to enhance participant response rates.

The questionnaire was a one-time assessment, available for completing by ATS during a three-week window in the month of October, which coincided with the fall academic semester. The survey consisted of 25 questions (96 items for response) spaced out over 4 separate sections, which took on average, about 20 minutes to complete. These sections included demographic information, Velociteach Questionnaire for Self-Assessing Your Work-Life Balance, The DSM-5 Self-rated Level 1 Cross-Cutting Symptom Measure, the Perceived Stress Scale, and the Coping Strategies Ranking instrument.

Instruments

The electronic survey created for the study integrated portions of a variety of previously validated measurement instruments, including the Velociteach Questionnaire for Self-Assessing Your Work-Life Balance[27]; The DSM-5 Self-rated Level 1 Cross-Cutting Symptom Measure[28]; the Perceived Stress Scale[23]; and the Coping Strategies Ranking instrument.

Velociteach Questionnaire for Self-Assessing Your Work-Life Balance

The self-assessment Questionnaire for Work-Life-Balance (WLB) (V-QSAWLB), developed by Neal Whitten of Velociteach, is an instrument used to quantify WLB scoring.[27] While not prevalent in Athletic Training research methods, this questionnaire is commonly used in the business field as a means to define and create awareness around individuals WLB, so effective balance can be achieved. This tool translates well to surveying AT, because questions can be altered to be profession specific, and summated for a perceived WLB total. The 41 items were rated in a 6-point Likert scale, ranging from 1 (never) to 5 (always), with the option for a 0 (no comment), with the highest possible score being 205. The questions summated to identify perceived WLB, with a higher score indicating an increased likelihood of poor WLB, and a lower score indicating an increased likelihood of positive WLB. There currently are not identified reliability and validity ratings for this assessment instrument.

DSM-5 Self-rated Level 1 Cross-Cutting Symptom Measure

The DSM-5 Self-rated Level 1 Cross-Cutting Symptom Measure (DSM-5 CCSM) was developed to aid in clinical decision-making for clients seeking psychiatric services, while facilitating investigation of the self-rated Mental Health (MH) issues.[28] There are thirteen domains assessed in the DSM-5 self-rated symptom measure, with all domain specific correlations showing significantly positive associations with each poor MH construct with regards to criterion-related validity, good to excellent test-retest reliability, and moderate-to-strongly correlated internal validity.[28] These domains encompassed depression, anger, mania, anxiety, somatic symptoms, suicidal ideation, psychosis, sleep problems, memory, repetitive thoughts and behaviors, dissociation, personality functioning, and substance use. These 13

domains were assessed via 23 items rated via a 5-point Likert scale, rating from 0 (none at all) to 4 (severe, nearly every day), with the highest possible score being 92. These questions were totaled to identify student perceived MH, with a higher score indicating poor perceived MH, and a lower score indicating a well perceived MH status.

Perceived Stress Scale

The Perceived Stress Scale (PSS) is a 10-item questionnaire used for measuring stress related to general life events.[23] This survey is applicable for use in a variety of populations due to the general phrasing of the questions. In the methods application, ATS were asked to rate their stress based on their perception over the past month or past 30 days. The 10 items were rated on a Likert scale, ranging from 0 (never) to 4 (very often). The questions were evenly divided based on negatively and positively weighted questions. An example of a positively weighted question is "In the last month, how often have you been able to control irritations in your life?" An example of a negatively weighted question is "In the past month, how often have you felt nervous or stressed?" The PSS has a maximum score of 40, in which a higher score can equate to higher levels of participant perceived stress. The PSS has been documented as valid and reliable in previous research across general populations, with reliability coefficients ranging from 0.75 to 0.85.[23]

Coping Strategies Ranking

The Coping Strategies Ranking (CSR) section was an 11-item ranking system where participants ranked popular Coping Strategies seen across previous research of the ATS population. Gaicobbi etc al[7], Mazerolle et al[9,15,16,18,19], Oglesby et al[9], Barrett et al[17], and Singe et al[26] documented and

identified these strategies through survey and interview-based methods as being commonly used coping interventions among ATS. These strategies included physical activity, substances, sleep, social support (family, mentorship, and peers), religion, personal interest tasks, music, and various strategies not otherwise categorized. This survey method may serve as the first documented instance of graduate ATS ranking prevalent coping strategies identified in previous ATS research. There is no current validity and reliability measures for this ranking.

Statistical Analysis

Statistical Analysis were conducted using IBM SPSS Statistics 27 (IBM Corp, Armonk, NY). Inferential and descriptive statistics were analyzed. Overall WLB, MH, and PS scores were generated as scale variables; determined by adding up the summation of their rated outcomes based on participant input. This resulted in a WLB TOTAL, MH TOTAL, and PS TOTAL score for each participant. Three one-way ANOVAs were calculated to examine total WLB, MH, and PS across participant NATA District classification, identified ethnicity, and NCAA division classification. Three independent samples t-test were conducted to examine total WLB, MH, and PS scoring across identified gender, program classification (first or second year), and clinical immersion experience. The level of significance for each test outcome was set a priori at $p \leq 0.05$.

RESULTS

Following data collection, data were exported into SPSS 27 software. There were 217 responses, with 193 of those responses being fully completed. This presented an 88.9% completion rate, with incomplete surveys being excluded from data analysis. In line with the purpose of the study,

multiple one-way ANOVAs and several Independent Sample T-Tests were computed to identify areas of significance in the data between descriptive indicators and participant input. The main variables of concern were participant input values for perceived Work-Life Balance (WLB), Mental Health (MH), Perceived Stress (PS), and the perceived impact of stress on academic performance. Each of these sections are the by-product totals of sectioned questioning that were computed into four separate scale variables to functionally depict a participants total perceived WLB, MH, Stress, and Stress Effect.

Institutional Impact

NATA District Classification

A one-way ANOVA was calculated comparing the participants gross totals from Work-Life-Balance, Mental Health, Perceived Stress, and Stress Effect across the ten NATA district classifications. A significant difference was found among the WLB in participants ($F_{(8,176)}$ = 2.343, p = < 0.05) (Table 2). Tukey's HSD (Table 3) was used to identify the differences between districts for WLB self-scoring. This analysis revealed that students in District 2 scored significantly lower (M = 110.69, sd = 13.77) than students in District 9 (M = 121.56, sd = 10.11). However, students in District 2 were not significantly different from District 4 (M = 114.45, sd = 10.09), District 7 (M = 115.27, sd = 9.92), or any other NATA district. District 1 (N = 3) and District 8 (N = 1) had significantly less participation than other districts like District 2 (N = 35) and District 6 (N = 32). District 8 was filtered out in order to run Post Hoc Tukey analysis for the one-way ANOVA due to low participation rates.

NCAA Division Classification

A one-way ANOVA was calculated comparing the total Work-Life-Balance, Mental Health, Perceived Stress, and Stress Effect of participants based on their NCAA division classification. No significant differences were found across the surveyed group ($F_{(2,184)} = 1.857$, $p = 0.159$). Participants at Division I institutions (M = 43.34, sd = 12.9) showed no significant differences from those at Division II (M = 38.42, sd = 12.5) or Division III (M = 42, sd = 13.3). No differences existed between student participants across NCAA classification.

Participant Academic Year

An Independent Samples t-test was calculated to determine whether the participant gross totals from Work-Life-Balance, Mental Health, Perceived Stress, and Stress Effect were dependent upon the participant's year in the program: first or second year. No significant difference was found in the surveyed group ($t_{(181)} = -0.347$, $p = 0.074$). The totals from the first-year group (M = 30.75, sd = 4.5) were not significantly different than those of the second-year group (M = 30.98, sd = 3.66).

Immersion Experience Participation

An independent samples t-test was calculated to determine whether the gross participant totals from Work-Life-Balance, Mental Health, Perceived Stress, and Stress Effect were dependent upon participant's involvement with a clinical immersion experience. No significant difference was found across the surveyed population ($t_{(181)} = -1.566$, $p = 0.120$). The totals of the immersion group (M = 30.4, sd = 4.64) were not significantly different than the non-immersed group (M = 31.38, sd = 3.58).

Demographic Differences

Participant Ethnicity

A one-way ANOVA was calculated comparing the total Work-Life-Balance, Mental Health, Perceived Stress, and Stress Effect of participants based on their identified ethnicity. No significant differences were found across the surveyed group ($F_{(5,180)} = 1.904$, $p > 0.05$). African American participants (M = 115.2, sd = 12.48) were not significantly different from Hispanic participants (M = 120, sd = 11.45), Caucasian participants (M = 115.46, sd = 11.65), or other surveyed groups.

Gender Identification

An independent samples t-test was calculated to determine whether participant gross totals from Work-Life-Balance, Mental Health, Perceived Stress, and Stress effect were dependent upon participant gender: male or female. A significant difference was found in the participant group in the area of Mental Health ($t_{(21)} = 1.883$, $p = 0.048$) (Table 4). The Mental Health scores of the female participants (M=43.3, sd=13.5) were significantly higher than the male participants (M=38.94, sd=9.88) (Table 5). There was however, no significance difference found across total Work-Life Balance, Perceived Stress, or Stress Effect between genders.

Tools Statistics

A statistics table (Table 6) was calculated to determine the frequency statistics of our instruments of survey. These instruments were the including the V-QSAWLB, DSM-5 CCSM, PSS, CSR. The CSR is unique to this study, so it is not comparable to previous research findings. The V-QSAWLB instrument provided the following self-reported WLB scoring (M=116.5, SD=11.6).

The DSM-5 CCSM provided the following self-reported mental health scores (mean=42.4, SD=12.94), with Domain 4 – Anxiety representing the largest percent of moderate to severe responses at 30.5%, followed by Domain 1 – Depression at 19.5% and Domain 2 – Anger at 19%. The Perceived Stress Scale provided the following self-reported scores (mean=30.84, SD=4.22).

Coping Strategies Ranked Among ATS

Table 7 presents a representation of the participants ranking of coping mechanisms used by Athletic Training professional graduate students as methods to manage WLB, MH, and PS. Among respondents, almost 38% percent of participants scored exercise or physical activity as their primary method of coping; sleeping (20.32%) was identified as the second most popular method of coping; and talking to family (10.70%) was identified as the third most popular method of coping.

DISCUSSION

Work-life balance, primarily surveyed through the predictors and prevalent of burnout in previous research regarding ATs and ATS, examined variables like EE, DP, and DPA when defining significant behavioral indicators for burnout.[9,20,29] In this study, traditional WLB methods were not utilized since poor WLB was seen as a predictor to burnout opposed to the two variables being used simultaneously. Previous research into ATS has focused on analyzing student perspectives that contribute to burnout development, viewing an imbalance or stressors as burnout predictors.[11-15] These include but are not limited to the role strain and time constrains voiced by students through observation and experience.[11] A poor WLB remains the route

towards academic and professional burnout;[7,8,18,32] however, this study sought to identify individuals or groups with elevated levels of significantly poor or difficult WLB.

Perceived Stress and Overlap of Variables

Perceived stress and mental health are variables commonly discussed through ATS research as predictors and components of WLB.[4,7,20] Across a previous ATS sampled group, it was suggested that there was moderate stress and risk for clinical depression in 1/3 of the sampled population.[23] This is a very significant finding, that did not align with what graduate ATS expressed in this survey. We found more students (30%) self-score themselves as moderately to severely relating to anxiety, with only 19% of students self-scoring themselves as moderately to severely relating to depression domains of the DSM-5 CCSM. In comparison to other student groups surveyed using the DSM-5 CCSM, they found similar outcomes to this study, rating anxiety as the most prevalent domain for potential symptom presentation (27.89%) and depression as the second highest (27.87%).[28] To address stress, the PSS instrument was used. In previous studies of ATS, PSS had been identified as 25.27, or moderately stressed.[23] In this study, our participants mean PSS score was 30.84. This is a significant finding, because of the implications of perceived high stress and higher risk for depression that exist for those with higher perceived stress.[23] In both of these descriptive identifying tools, a level of increased perceived stress and perceived MH prevalence have been suggested in this population compared to previously studied populations. While the worldwide COVID pandemic has alternated in-person classes, clinical involvement, and a feeling of preparedness among students,[31] there may be implications surrounding the expectations and transition of students from undergraduate education to graduate education. Furthermore, AT graduate education adds a level of clinical

requirements like immersion experiences, that couple with research and academic coursework to enhance perceived stress.

Previous research by authors like Koutsimani et al,[30] sought to identify an overlap between mental health, stress, and work-life balance. However, as identified and validated by these survey measures, mental health, WLB, and stressors should all be assessed separately due to previous lack of association in statistical analysis and a lack of overlap in occurrence across the current sampled ATS population.[30] While MH occurrence was still elevated in our sample group in concurrence with previous findings from researchers like Mazerolle et al,[20,23,25] these findings should be accepted with awareness of the current worldwide pandemic, with which 1 in 5 students have reported burnout and significant deterioration in mental health.[25] COVID-19 has already been documented to have adverse effects on student and professionals alike in the profession, all stemming from the uncertainty created by the pandemic.[31]

Academic Year

In AT systematic review of burnout in the profession, it was found that upper-level students experienced significantly higher levels of burnout compared to lower-level students.[9] This research was primarily surveyed undergraduate populations, which would place seniors at elevated levels of stress. This distinction between participant academic year was not validated in this study across WLB, MH, or PS in graduate schools, which have first and second year students. However, research has begun to examine differences in WLB across undergraduate and graduate ATS,[13,20,21] suggesting that while graduate ATS still deal with high levels of stress and DPA, they manage and present lower burnout subscale like EE and DP compared to

undergraduate students.[20] These early findings may have played an influence in the educational shift towards graduate study, as a means of promoting ATS retention, which has been negatively correlated with ATS perceived burnout.[9,11-15]

Gender

Gaicobbi et al[7] and Mozerolle et al[14] have both previously documented sex differences across the profession of athletic training and among ATS. Females, specifically in the college setting, presented the highest burnout scores of any sampled group in AT,[7] with direct links to discriminatory management being the culprit for increased WLB, burnout, and MH risk[14]. This current study suggests that female ATS (N=138) perceive their mental health to be more severe than male ATS (N=39). Across thirteen domains of MH self-assessment, utilizing a DSM-5 level 1 self-rated measure, females scored their MH five points higher or more frequent on average than males. Along with recommendations from Stilger et al,[22] female ATS may benefit and from education and practice of stress management techniques and coping strategies. Though there were no other documented differences between gender identification in other survey variables like WLB, female ATS still routinely manage coursework and clinical requirements while operating amidst male dominated sports. Strategies like identified mentorship, clear communication, and supportive staff and supervisors should be sought out or provided by athletic training programs, since it is well documented that ATS perceptions and WLB optimization can be heavily affected by mentors like preceptors and program directors.[14,32]

NATA Districts

Previous research has called for and began the process of examining descriptive differences across NATA districts, of which there are 11 as of June 2022.[20,33] Given that data were collected before June 2022, NATA district data only reflects 10 districts. However, these articles only indicated a variety of district participation, while never comparing the outcomes across these districts. In these findings, there are significant differences in student rated WLB summated scores, with higher scores indicating a more strenuous WLB. With the mean score being 117, most districts hovered around that centralized score except for three outliers. District 2 scored much lower (M = 110.69) than students in District 9 (M = 121.56) and District 1 (M=125.67). While no research exists to provide insight into NATA district distinctions across WLB practices, there are discrepancies across NATA district representation of states. In the example used above, District 1 and District 9 represent 6 and 7 separate states as a district, whereas District 2 represents 4 total states. This differences in representation could result in larger districts having increased variance or outliers in their quantity, which drives the WLB total up, or it could be the result of more participants from District 2 (N=40) compared to District 1 (N=3) or District 9 (N=27). These multi-digit differences also implicate the possibility of lessened stressors or enhanced coping behaviors not shared universally by students across districts. Other implications include the effects of the COVID-19 pandemic across different regions of America, whom all handled the COVID-19 pandemic separately, creating new responsibilities and uncertainties across the country.[25,31] Lastly, it is important to identify the differences in District 2 student page,[37] and the volume of resources and communication available, compared to the lack of such on the District 9 student page.[38]

Coping Strategies

In the vast majority of research surrounding WLB, MH, burnout, and stress management in athletic training, stressors and predictors are commonly discussed alongside coping and management strategies. ATS and generalized college students have been utilizing coping mechanisms like humor, mentorship, observation, time management, etc. to navigate their education and WLB before and now during the COVID-19 pandemic.[13,22,34,35] This study suggests that students are drifting away from previous research suggestions that social support structures are the primary strategies utilized by ATS for management of stressors,[11,23,34] and more individualistic strategies like exercise and sleep are preferred as a first step before social supports like family and peer support.

In association with the COVID-19 pandemic, was the development and incorporation of coping strategies to manage inflated levels of stress.[35,36] Examples of pandemic-related coping mechanisms included strict personal protective measures (90%), avoiding public gatherings (80%), and personal coping strategies like gaming, religious devotion, social media, communication, and individual relaxation techniques.[36] These individual relaxation techniques included meditation, physical activity like exercise or sports, music, and more. As students are maneuvering out of a worldwide pandemic that created stress and uncertainty,[33] they are moving into a realm of graduate education that is also stressful and uncertain. This allows for easy carryover of the tendencies and coping strategies developed in a previous stressful situation, into the next stressful setting. As indicated when discussing differences across NATA districts for WLB scoring, the COVID-19 pandemic has largely diluted or directed students away from the usage of social support groups since social gatherings were largely discourage.[26] It is unclear

whether social coping mechanisms will re-emerge; however, previous research is highly encouraging of mentorship because of the aspects of professional socialization and positive perceptions it creates among ATS.[12-14,32,33]

LIMITATIONS

This study presented four main limitations that could influence the data. First, this study is primarily limited by its singular sampling instead of repeated measures of this population across multiple semesters or points in the semester. Data were collected across three weeks in September, ending October 1st, 2021. With this being the beginning of the semester, and not coinciding with the elevated workload seen as students' progress in the semester, this could present an incomplete picture of student WLB, MH, perceived stress, perceived stress effect on academic performance, and the evaluation of coping measures on managing these variables. Secondly, this study does not align its burnout and WLB data collection methods with traditional testing measures like the MBI, which assists researchers in identifying levels of emotional exhaustion, depersonalization, and perception of personal accomplishment. These three variables are the standard for defining and representing burnout in athletic training research. Instead, our methods utilized a generalized and numerical career WLB survey measure. While this allows for a unique take on academic WLB and student vocal representation, correlation to previous research is limited. Third, this survey was conducted during the COVID-19 pandemic, which presented separate academic and lifestyle stressors not traditionally placed on this population during previous sampling efforts. Furthermore, the COVID-19 pandemic placed additional workplace strain on the profession of athletic training, which may have impacted students engaged in clinical and immersive education requirements. Lastly, participation from district 8

(N=1) was extremely limited and their data were filtered out for statistical analysis to be run. District 1 (N=3) also presented low participation compared to the other 10 NATA districts, which could affect representation and outcomes. This highlights the need for further research that encourages a larger volume of participation across all NATA districts.

RECOMMENDATIONS

With indications that WLB and MH may be difference across NATA districts and gender classifications, future research should seek to validate these findings. This can be achieved by using more standardized assessment tools, like the MBI (Maslach Burnout Inventory) for assessing burnout and poor WLB predictors. Future research should also investigate quantifying the noted differences between ATS based on gender and across districts. Gender barriers have been noted across the professional setting of athletic training, but to our knowledge, this study serves as the first documented occurrence of gender differences across the graduate student population of athletic training. This is also the first study, to our knowledge, that demonstrates differences in WLB across NATA district classifications among students or professionals. While the NATA functions as a whole, each district has their own level of structure and member involvement. As highlighted, different districts like NATA district 2 and district 9 have very different websites, resources, and opportunities for regional student involvement, information, or support.37,38 While this does not capture the whole picture, it does demonstrate a difference in administrative initiatives across NATA districts. Future research should seek to further understand these ATS WLB differences across NATA districts.

While the COVID-19 pandemic serves as a backdrop to the information gathered, there are significant findings across perceived stress and coping strategies. It is unique that students are relying on more individualistic coping measures to address their stress, this study has also shown that perceived stress is high in the ATS population. This shift in coping measures may be sufficient during a pandemic, but individualistic coping measures have never been the forefront of recommendation from the NATA for managing WLB. Professional socialization could be considered in future methods creation since there are documented implications of learned behavior and coping strategies based on professor and preceptor modeling. This could explain the differences seen across gender and district classifications. Finally, coping strategies should be further quantified by statistical analysis so recommendations can be incorporated into athletic training education to offset the impacts of WLB, MH, and perceived stress.

Finally, program directors and athletic training facility should identify and strive to create socialization elements among ATS since it has been described as a critical foundation in the preparedness and establishment of a positive and manageable WLB.[12] Termed by Barrett et al[13] as the learned characterization of the profession that one is pursuing, professional socialization could be a key for future research into the means of professional and academic retention into athletic training.[15] While not observed as primary methods of coping, social structures should again be orchestrated among ATS because of their previous prevalence and because of the implications professional socialization could present on WLB and ATS stressors. Furthermore, authors like Crutcher et al,[23] continually emphasize the benefit of social support networks (family and peer) among ATS and how it enhances a student's ability to handle stress. In research conducted in the ATS student population during the COVID-19 pandemic, it was

noticed that students were replacing previously common coping mechanisms like social support with skills like adaptability and time management, since social support systems were largely diluted during the pandemic.[26] Examples of program socialization implements include those previously suggested by Mazerolle, Bowman, & Dodge,[39] as formal and informal processes. Formal processes include ATS club, orientation classes, and pre-programmatic observation hours. Informal processes include social outings, peer mentorship, and more. These processes have been documented as successful socialization elements that progress into positive social coping structures as students encounter stressors, benefiting ATS whether it be generalized or sex specific stressors.[14,32,39]

CONCLUSIONS

This study presents significant findings and recommendations for athletic training educators and mentors. ATS participants in this survey indicated work-life balance differences across NATA district classifications, while also indicating that female ATS have elevated MH prevalence compared to male ATS participants. Perceived MH was consistent in our findings with previous literature, with perceived anxiety and depression domains scoring highest. However, students in this study perceived their stress to be high compared to previously studied ATS, who scored their perceived stress as moderate. Amidst a global pandemic, ATS are managing their work-life balance, mental health, and perceived stress in a more individualistic manner than identified before. Moving forward, athletic training educators, leaders, and preceptors should seek to promote professional socialization experiences that create positive perceptions and coping strategies in the athletic training student. These positive social support structures and avenues of

mentorship could be pivotal in ATS management and career preparedness of WLB, MH, PS, and burnout prevention.

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Appendix: Tables

Table 1: Descriptive Participant Information

Variable		Frequency (N)	Percent (%)
Gender	Female	167	76.3
	Male	45	20.5
	Total	212	96.8
	Missing	7	3.2
Ethnicity	Asian or Pacific Islander	14	6.4
	Black or African American	20	9.1
	Hispanic or Latino	19	8.7
	Native American or Alaskan Native	2	.9
	White or Caucasian	149	68.0
	Multiracial or Biracial	8	3.7
	Total	212	96.8
	Missing	7	3.2
NATA District	D1 (CT, ME, MA, NH, RI, VT)	3	1.4
	D2 (DE, NJ, NY, PA)	40	18.3
	D3 (DC, MD, NC, SC, VA, WV)	27	12.3
	D4 (IL, IN, MI, MN, OH, WI)	25	11.4
	D5 (IA, KS, MO, NE, ND, SD, OK)	21	9.6
	D6 (AK, TX)	37	16.9
	D7 (AZ, CO, NM, UT, WY)	16	7.3
	D8 (CA, HI, NV, Guam, American Somoa)	4	1.8
	D9 (AL, FL, GA, KY, LA, MS, TN, Puerto Rico, Virgin Islands)	27	12.3
	D10 (AK, ID, MT, OR, WA)	11	5.0
	Total	211	96.3

	Missing	8	3.7
NCAA Classification	DI	156	71.2
	DII	33	15.1
	DIII	23	10.5
	Missing	7	3.2
Program Year	First	139	63.5
	Second	74	33.8
	Total	213	97.3
	Missing	6	2.7

Table 2: One-Way ANOVA results comparing participant gross WLB, MH, and PS totals across NATA Districts

		Sum of Squares	df	Mean Square	F	Sig.
WLB_TOTAL	Between Groups	2391.502	8	298.938	2.343	.020
	Within Groups	22460.033	176	127.614		
	Total	24851.535	184			
MH_TOTAL	Between Groups	414.833	8	51.854	.299	.965
	Within Groups	30477.113	176	173.165		
	Total	30891.946	184			
STRESS_TOTAL	Between Groups	61.520	8	7.690	.416	.910
	Within Groups	3176.149	172	18.466		
	Total	3237.669	180			

Table 3: Post-Hoc ANOVA results comparing participant gross WLB, MH, and PS totals across NATA Districts

Tukey HSD

Dependent Variable	(I) What is your NATA District?	(J) What is your NATA District?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
WLB_TOTAL	D2 (DE, NJ, NY, PA)	D1 (CT, ME, MA, NH, RI, VT)	-14.98095	6.79588	.407	-6.3636	36.3255
		D3 (DC, MD, NC, SC, VA, WV)	-8.27081	3.03225	.146	-15.0696	28.4899
		D4 (IL, IN, MI, MN, OH, WI)	-3.76883	3.07355	.950	-10.6246	33.0489
		D5 (IA, KS, MO, NE, ND, OK, SD)	-6.06429	3.16651	.604	-13.0507	30.8840
		D6 (AK, TX)	-6.34554	2.76298	.350	-12.7880	30.0588
		D7 (AZ, CO, NM, UT, WY)	-4.58095	3.48622	.926	-12.0398	32.8398
		D9 (AL, FL, GA, LA, MS, TN, KY, PR, VI)	-10.87429*	2.95815	.009	-17.5723	25.7856
		D10 (AK, ID, OR, MT, WA)	-8.11429	4.05062	.543	-16.4895	30.2228

Table 4: Independent samples test comparing participant gross WLB, MH, and PS totals across Gender Identification

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
WLB_TOTAL	Equal variances assumed	2.497	.116	.031	184	.975	.06615	2.11914	-4.11479	4.24708
	Equal variances not assumed			.027	49.557	.978	.06615	2.43050	-4.81675	4.94904
MH_TOTAL	Equal variances assumed	3.950	.048	1.883	185	.061	4.35534	2.31328	-.20847	8.91914
	Equal variances not assumed			2.252	79.640	.027	4.35534	1.93387	.50655	8.20412
STRESS_TOTAL	Equal variances assumed	.026	.873	1.418	181	.158	1.08838	.76764	-.42629	2.60306
	Equal variances not assumed			1.294	52.050	.201	1.08838	.84124	-.59964	2.77641

Table 5: Gender Group Statistics

	Which of the following best describes your biological gender?	N	Mean	Std. Deviation	Std. Error Mean
WLB_TOTAL	Female	148	116.5135	11.01359	.90531
	Male	38	116.4474	13.90450	2.25561
MH_TOTAL	Female	148	43.3041	13.51324	1.11078
	Male	39	38.9487	9.88606	1.58304
STRESS_TOTAL	Female	145	31.0621	4.06240	.33736
	Male	38	29.9737	4.75046	.77063

Table 6: Descriptive Frequency Statistics across Self-reported Questionnaires

		WLB_TOTAL	MH_TOTAL	STRESS_TOTAL
N	Valid	186	187	183
	Missing	33	32	36
Mean		116.5000	42.3957	30.8361
Median		116.0000	39.0000	31.0000
Mode		115.00	33.00	30.00
Std. Deviation		11.62116	12.93963	4.22387
Range		75.00	61.00	33.00
Minimum		71.00	24.00	17.00
Maximum		146.00	85.00	50.00

Table 7: ATS Ranking of Common Coping Strategies used to manage WLB Stressors

#	Question: Please rank each coping response based on its perceived effects on your stress and feeling overwhelmed. (1 = greatest effect or best response, 11 = least effect or worst response)	1	N
1	Exercise or Physical Activity	37.97%	71
2	Alcohol	1.07%	2
3	Smoking	0.00%	0
4	Sleep	20.32%	38
5	Chores	4.28%	8
6	Talking to friends	6.42%	12
7	Prayer and meditation (religious practices)	6.42%	12
8	Projects and Hobbies	2.67%	5
9	Listening to music	6.95%	13
10	Other	3.21%	6
11	Talking to family	10.70%	20