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ORIGINAL RESEARCH

Student Perspectives on Burnout

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Context: While burnout has received a great deal of attention within the athletic training profession, there is little data on how it affects athletic training students (ATSs).

Objective: To determine what factors influence burnout among ATSs enrolled in accredited athletic training education programs.

Design and Setting: Basic, interpretive qualitative study employing on-line interviews with students enrolled in Commission on Accrediting Athletic Training Education (CAATE) athletic training programs.

Patients or Other Participants: Each of the 14 (7 males, 7 females) ATSs, who represented 3 NATA districts, had completed at least one full academic semester of coursework and a clinical assignment. The average age of the participants was 21.4 +/- 1.5 , eight of the ATSs were seniors, and six were junior level students.

Data Collection and Analysis: All interviews were conducted electronically with three separate days of postings using an on-line platform. Interviews were cut and pasted verbatim and analyzed inductively borrowing from the grounded theory approach. Peer review, data triangulation, and multiple analyst triangulation were completed to ensure credibility and trustworthiness of the study's findings.

Results: Twelve out of the fourteen ATSs stated that they have experienced burnout, and all associated a career in athletic training with the potential for burnout. Role Strain and Time emerged as the two major factors leading to burnout, and many capitalized on Social Support and Personal Time to alleviate the stressors causing their burnout.

Conclusion: Athletic training students must find time to balance multiple roles and responsibilities, however, when they feel unable to adequately address those roles, they experience burnout. Program directors and educators are encouraged to promote stress management strategies with their students, and encourage them to seek involvement in outside activities to help increase their ability to regulate and control their stress levels.

Key Words: stress, time, clinical education, role strain

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Perceptions of Burnout from the Students' Perspective

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Experiencing burnout is not uncommon for allied health care professionals[1] or athletic trainers (ATs), particularly due to the personal and emotional relationships forged with their patients.[2-9] The condition, which has multiple descriptions and facilitators, is most often characterized by periods of emotional depletion (emotional exhaustion), cynical attitudes toward one's job or patients (depersonalization), and the tendency to negatively evaluate oneself or their work (reduced personal accomplishment).[10] Despite the many definitions, burnout can be simply classified as a condition that results in emotional[10-13] and physical[14] exhaustion facilitated by prolonged stress.

Athletic trainers have been shown to exhibit higher levels of burnout than those in other helping professions, such as teachers and social workers,[4] and are greatly concerned about the potential for burnout due to the nature of their work environment.[15] Personal and organizational factors, such as stress level, social support network, personal time, workload, role conflict, and organizational demand, have been documented as predictors of burnout for health care providers.[2-6,9,16] Specifically, for ATs, personal characteristics predictive of burnout include stress level and leisure time, while organizational factors include coaches' pressure to medically clear an athlete, workload (number of athletes to care for), and frequency of injury-free seasons.[6] The Maslach Burnout Inventory (MBI) is considered the gold standard for measuring burnout among health care professionals,[10-12] and is commonly utilized by athletic training researchers when investigating the concept.[4-9,17] The instrument is built upon the operational definition of burnout as established by Maslach and her colleagues, which includes emotional exhaustion, depersonalization, and decreased personal accomplishment.[10-12] Recently, however, Clapper and Harris[5] recognized the need to have a version of the MBI specific to athletic training to better represent profession-specific contributing factors to burnout. The instrument, termed the Athletic Training Burnout Inventory (ATBI), incorporates elements from the established MBI, but also includes observations made by athletic training researchers[2-4] regarding organizational support, time commitment, and role strain/overload.[5] The ATBI reflects the most frequently cited factors that create the potential for burnout among ATs working in the clinical setting.

While the concept of burnout has been widely studied in the athletic training profession, a majority of the literature has examined those already certified and working in the collegiate setting using the MBI.[4-6,8-9,15] This leaves an identifiable gap in the literature, as these studies have not addressed the occurrence of burnout among athletic training students (ATSs). The prevalence of burnout among graduate students in comparable allied health care professionals is well documented, particularly for nursing, medical, and physical therapy students.[18-22] Generally speaking, undergraduate students have high stress levels,[23] which is no different for an athletic training student.[24] However, ATSs are also required to engage in clinical education experiences, which require additional time and preparation and can lead to increased stress levels. Riter *et al*.[7] recently reported that undergraduate ATSs demonstrate a moderate, cumulative degree of burnout from their roles and responsibilities associated with clinical education, especially during their final semesters of academic study. Although an important finding, the study had several limitations, including a small sample size and recruitment of subjects from one undergraduate athletic training program.

Therefore, the purpose of this study was to build upon the existing literature on burnout, and to specifically extend the work of Riter *et al*.[7] who investigated the presence of burnout among undergraduate ATSs. Moreover, because experiences of burnout can be very personal, we are utilizing a qualitative approach to closely examine this phenomenon, which has infiltrated all levels of the athletic training profession. Specifically this study sought to answer the following questions:

1. Do ATSs perceive to experience burnout as it relates to their roles and responsibilities as a student?

2. If ATSs are experiencing burnout based upon their personal assessments, what factors directly contributed to the experience; and

3. What potential influences does this have on their outlook of the profession of athletic training?

METHODS

Qualitative methodologies, although not a new form of scholarship, are emerging as useful in internet based research methods, particularly in the form of interviews.[25] This type of data collection methodology has many advantages, including the inclusion of a geographically dispersed sample of participants, communication between the researcher and participant at the convenience of the participants, ample time for reflection[26] before responding, increased anonymity, and the reduction in misinterpretation of the data.[25] Seeking to capture these advantages and to answer the research questions, the researchers opted to use a web-based management system to provide a secure place to store data and to conduct the interviews. All participants were assigned individual IDs and passwords, all responses were only viewed by the researchers, and there was no interaction among participants. To confirm and support the findings of the online portion of the study, Likert-scaled questions, borrowed from burnout inventory scales,[5,10] were used to gain a quantitative representation of the student's perceptions. This step, methodological triangulation, is often used in qualitative methodology to ensure data credibility.

Participants

Athletic training students who had completed at least one full academic semester including a clinical practicum experience were purposefully recruited for participation. The inclusion criteria included enrollment in a Commission on Accreditation of

Athletic Training Education (CAATE)-accredited athletic training program and completion of one semester of clinical education and associated coursework, and access to a computer/internet. The researchers initially capitalized on preexisting professional relationships with program directors at CAATE-accredited schools to identify students meeting the criteria (convenience sample).[15,27-28] Additional participants were recruited by a snowball sample[15,27-28] by recruited participants, as well from other colleagues with connections to students enrolled in CAATE-accredited programs. Recruitment of subjects ceased once we met data saturation.[15,28] Institutional review board approval was obtained prior to data collection and the participants voluntarily consented to participate.

Fourteen (7 males, 7 females) ATSs with a mean age of 21.4 ± 1.4 from 8 CAATE-accredited athletic training programs participated in the on-line research study. The volunteers represented three National Athletic Trainers' Association (NATA) districts, and were in their fifth semester (± 2) of their athletic training program. Four of the 14 also held positions within their athletic training student organizations (ie, president, treasurer), and all but one participated in extracurricular activities (intramurals, church groups, etc.). On average, the group spent 18 ± 7.5 hours engaged in clinical education experiences (clinical assignments) and 10 ± 7 hours studying each week. Interestingly, males reported spending more time studying than females (14 ± 8 = males; 7.5 ± 4.0 = females). Table 1 summarizes the individual participant demographic information.

Pilot Study

Prior to data collection, a pilot study was conducted to establish credibility and reliability of the data collection methods and findings. Nine ATSs (4 males, 5 females) at one university who were either juniors or seniors participated in the pilot study. The data was compiled and an initial analysis performed. The participants were instructed, after completing the study, to provide any feedback to the researchers for improvements in clarity and flow of the interview instrument, as well as the background questionnaire. This was an important step to ensure the questions were not misinterpreted, as well as a means to establish face validity due to the on-line nature of the study. Upon evaluation of the data and feedback generated by the pilot study participants, several of the questions were reworded or reorganized for clarity or to avoid redundancy. Data generated by the pilot study was not included for analysis.

Data Collection Procedures

After completing an initial background questionnaire, the participants were sent instructions for study completion. The background questionnaire included demographic questions including age, semester standing, as well as other information regarding the student's clinical experiences. Additionally, students completed a series of 7 Likert-scaled questions borrowed from the MBI and ATBI (1 = never to 6 = always true) on burnout. In total, participants were asked to respond to 7 questions borrowed from both validated measures of burnout. This step, referred to as methodological-triangulation, was included to help confirm/reject the findings generated by the on-line interviewing.[28] Since no verbal communication took place during the online portion of the research, these few borrowed questions were intended to be supplemental and help support or refute the data collected through the online interviews. Furthermore, the Likert scale questions were used previously in athletic training research,[5-7] which should help draw parallels upon data analysis.

All participants completed a series of 11 questions over the course of one week during the mid-point of the spring semester. Questions were posted on Monday, Wednesday, and Friday mornings. An email broadcast was sent to each participant to alert them of the new posting, and to remind them to complete previous questions. Participants were able to log in and out at their leisure to respond to new or edit previous responses. The

Table 1. Participant Demographic Information

Name	Gender	Age	NATA District	Academic Standing	Current Clinical Rotation
Lisa	F	22	1	Senior	DIII College
Stephanie	F	21	2	Junior	High School
Robin	F	20	2	Junior	High School
Sam	F	26	1	Senior	Spring Football and MBB
Kayla	F	22	2	Senior	High School
Scarlett	F	21	1	Junior	High School
Danielle	F	22	1	Senior	D-IA
Rick	M	21	1	Senior	Men's BBALL
Karl	M	21	4	Senior	M/W BBALL
Sven	M	22	1	Senior	DI Baseball
Cade	M	20	1	Senior	Women's LAX
James	M	22	1	Junior	Women's LAX
Bobby	M	20	4	Junior	ER, Spring Football
Luke	M	20	2	Junior	High School

structured interview questions were derived from previously existing literature on burnout including the MBI and the ATBI. Two athletic training scholars with qualitative research experience reviewed the questions for clarity, interpretability, and content prior to data collection. Upon completion of data collection, which was based upon data saturation[15,28] and equity of participants (gender and academic standing), the data was cut and pasted into a Word document for analysis. All participants were assigned a pseudonym for confidentiality.

Data Analysis

The interview data was analyzed inductively, borrowing from the grounded theory approach,[27,29] as well as from the steps discussed by Pitney and Parker,[28] and included:

1. All interview transcripts were carefully read independently by two researchers to gain a holistic sense of the data collected.
2. Key information (data units) was identified as it related to the purpose and research questions established at the outset of the study.
3. Each data unit was assigned a label to capture its meaning (open coding).[27,29]
4. Labels were thematized as emerging categories developed.
5. Relationships between categories were evaluated and examined, and then collapsed together or separated when appropriate (axial coding).[27,29]
6. All final themes were reviewed with the research team and peer reviewer before a final presentation of the data was confirmed.

Establishing Trustworthiness

Trustworthiness was established by peer review,[27-28] triangulation,[30] and multiple analyst triangulation.[28] An AT with more than 15 years of research and athletic training experience provided a peer review. This peer evaluated the data and emergent themes, as interpreted by the researchers, to determine credibility and accuracy with the interpretations. They also provided the final confirmation of the emergent themes. The data collected was triangulated using two distinct methods, including participant triangulation and methodological triangulation. Participant triangulation was secured by interviewing ATSs enrolled at different programs in different regions of the country, as well as by including ATSs at varying academic levels (juniors and senior level students) and both males and female students. Although participant triangulation is not considered a traditional triangulation method,[27,30] it was employed in this study to gain multiple perspectives to ensure that the data collected was an accurate reflection of the emerging themes and the opinions shared by the participants. In addition to completing the on-line interview questions, all participants completed a background questionnaire, which included several measures of burnout. This combination of interview and a questionnaire response was used to add credibility to the findings.[31] Utilizing several researchers to analyze transcripts and discuss emergent themes can help reduce the possibility of misinterpreting the data .[28] In this particular case, 3 researchers were involved in data analysis process.

RESULTS

Twelve of the fourteen ATSs interviewed indicated experiencing burnout at some point during their academic preparation. James stated, “I have definitely experienced burnout as an AT student.” Kayla concurred, saying, “I have experienced a few cases of burnout [during my studies].” When asked how they defined burnout, the participants identified emotional and physical exhaustion with the condition, and linked it to experiences of prolonged stress. They also felt burnout was experienced more often at the end of the semester or academic school year, due to the cumulative effective of their demanding schedules. Kayla continued, “It really is a snowballing effect. It just progresses.” Moreover, the participants, when asked whether burnout is a concern for the profession of athletic training**,** all were in agreement that it was a major concern. Danielle’s response was, “I think over time, some people will eventually have trouble keeping a good work ethic and enthusiasm for the profession, considering the high demand of hours and stress that is put on athletic trainers.” Karl simply said, “Absolutely, it’s a concern.” While several factors were discussed as contributing factors (workloads, responsibilities), the 2 most often cited factors contributing to burnout among ATSs were time and role strain (Figure 1).

Factors Causing Burnout

Time

Time-related issues centered on the amount of time necessary for the student to meet their responsibilities as an ATS, as well as those of being a college student. Bobby discussed why he experiences burnout, stating, “There is not enough time in a day to do everything that I need to get done and that I have to go hard all day long to make sure that I can even keep up [with all my academic and clinical responsibilities].” Robin, another participant, also attributed her experiences of burnout to the

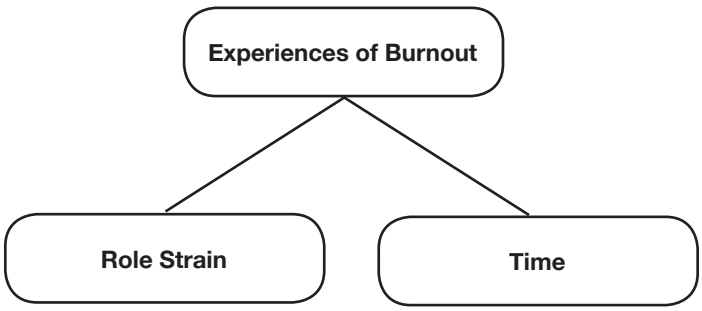

Figure 1. Sources of Burnout for Athletic Training Students in CAATE-accredited Programs.

limited time during the day. She discussed her sources of stress as coming from a multitude of time-dependent activities, which over time, lead to feelings of burnout. She replied,

> *"Personally, my greatest source of stress comes from having limited time to work on schoolwork after performing clinical hours. We could be covering a team anywhere from 3 hours to 6 hours on a school night depending on what was going on. That on top of 3 or 4 classes every day begins to add to my stress level. I am on scholarship at the university I attend and have to maintain a certain grade point average and I also strive give my best effort in everything I do. Over time this can be overwhelming."*

Limited time also impacted the ATS's ability to enjoy activities outside their academic and clinical responsibilities. Cade commented, "I find that my greatest source of stress comes from the fact that I have such limited time to spend for myself and the people that I care about. After a while, it gets frustrating." Sawyer had a similar opinion,

> *"I feel that I have felt burnout at some points, but it has only been temporary. I think the amount of hours I needed to work, mixed with athletes who were not appreciative for the time you put in for them, and stressing about schoolwork was the reason for the burnout. It was the struggle to manage my time between my clinical hours, schoolwork, and social life. It is tough to get all my school work done while getting all the hours I need for clinical, and it is hard to stay in touch with friends."*

The time commitment associated with their athletic training responsibilities, particularly the time spent completing clinical education hours, limited the students' abilities to accomplish other tasks and assumed responsibilities. This is confirmed by the participants' responses to 2 of the Likert scale questions, which indicate a moderate level of concern with time issues related to extracurricular activities (see Table 2).

Role Strain

Time-related issues also facilitated role strain for these ATSs. Role strain, which precipitated experiences of burnout, was related to the time commitment necessary to be an ATS. The students experience *role strain* through role conflict, as they often struggled to fully meet the responsibilities associated with the multiple roles with which they were involved (student, ATS, friend, etc.). Stephanie said, "I find my greatest source of stress juggling my time between class, school work, and my internship while still trying to have free time to hang out with my family and friends." Rick highlighted workload as the major factor, stating, "The workload and hours being an A.T. student can be stressful and exhausting." Samantha touched on the influence of time and the assumption of multiple roles, which may not always allow for completion of all responsibilities and the strain it can initiate.

> *"I was experiencing burnout because I had just become President of the Sports Medicine Club, I am involved in many other university activities, I have a part time job, 5 classes, a clinical rotation, I am married, and I am trying to be all of these roles, and to the best of my ability. By the time, it was midterms I was swamped. I could no longer manage as I had before I had to restrict in some areas and increase in others, which was very overwhelming."*

As highlighted in Table 1, the participants identified being exhausted and wanting more time to spend on social/personal interests and with family and friends. *Role strain* and *time*-related issues are separate factors contributing to burnout for ATSs. A lack of time, however, can precipitate role strain and burnout for students.

Coping Strategies to Reduce Burnout

Two of the 14 ATSs felt that they had not experienced burnout. Their strategies to avoid burnout during stressful situations were twofold, and are presented in Figure 2. The other participants, despite discussing similar burnout prevention strategies, reported being unable to cope as successfully with stress and their responsibilities as these two.

Social Support

Social support is simply defined as a group of people or an individual who provided support and shared other or outside

Table 2. Mean Scores to Burnout Inventory Questions

Question[a]	Mean ± SD[b]
1. I feel emotionally drained from performing the duties of an athletic training student.	3.2 ± 1.1
2. I feel emotionally exhausted after my clinical rotation (end of each day).	3.0 ± 1.4
3. I feel as though I am working extremely too hard.	3.5 ± 1.2
4. I feel as though I have too many responsibilities as an athletic training student.	2.9 ± 1.1
5. I wish I could spend more time with my friends and family.	5.0 ± 1.6
6. I wish I had more time to spend on extracurricular activities.	4.5 ± 1.0
7. I feel overwhelmed by the duties I am expected to perform as an athletic training student.	3.0 ± 1.3

[a] Questions were adapted from the Mashlach Burnout Inventory (MBI) and Athletic Training Burnout Inventory (ATBI)
[b] Likert scale ranging from 1 (never) to 6 (always)

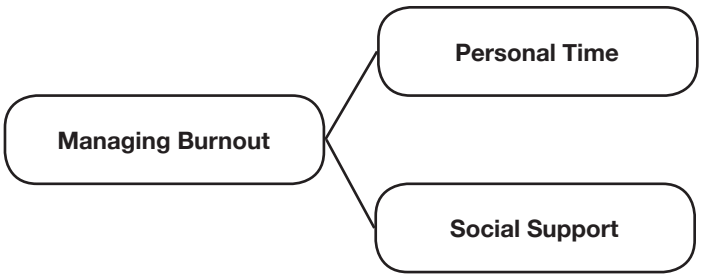

Figure 2. Ways Athletic Training Students Address Burnout

interests, which ultimately helped the student reduce stressful experiences. Danielle said, "I have not experienced burnout. Although there was a time where I worked long clinical hours and had very few days off in the span of a 4-month period, my friends/ classmates helped me cope with the stresses." Cade had similar thoughts about support groups, particularly his fellow peer ATSs, and said, "I have found that the easiest way to cope with the amount of stress that is put on me through my close relationships with the other athletic training students, as they are able to not only understand what I am going through, but also to help with classes and clinical." Another ATS valued a roommate who provided a distraction away from the daily grind of schoolwork and clinical responsibilities. She said, "My roommate and I have been rooming together for three years now so we have established TV nights to watch certain TV shows to take a break from school [and the stress]. "

Personal time

Personal time simply characterized the participant's utilization of free time to rejuvenate or cope with the stress in their lives. Many of the participants discussed proactive strategies as a means to prevent burnout, as they recognized prolonged periods of stress without relief, would or has lead to burnout for them personally. Regardless of the stressor, many described the importance of stress management activities as a way to avoid or mitigate the negative influence of burnout. Paul said, "To cope with stress I like to work out. I feel that it lets me burn off some energy and also gets my mind off of how busy I am." Sven continued to say, "I think burnout can be prevented as long as you find a way to de-stress." Stephanie, echoed Sven's comments about finding a way to distress, replying, "When I feel overwhelmed with school, I'll take an evening off and hang out with my family, boyfriend or friends or watch a movie instead of working on an assignment. Usually that time off is enough to "de-stress" me or at least lessen the stress to where it's bearable again." Time for leisure activities was a central point made by all the participants about preventing burnout, or at least managing their responsibilities as ATSs. Karl stated, "I do something that I enjoy and that takes my mind completely off the source of stress. It is usually, something like hanging out with friends, watching TV, playing sports, exercising, or playing video games."

DISCUSSION

The prevalence of burnout is well documented in the athletic training profession,[2-9, 15, 17, 32-36, 38-43] yet little is known about its occurrence in ATSs. Our purposes, therefore, were to determine whether burnout is a concern for ATSs and identify what factors may contribute to its occurrence during the academic school year. Analogous to the findings of Riter *et al*.,[7] our findings indicate that ATSs do experience burnout during their undergraduate studies. Their experiences of burnout were directly related to the *time* and *strain* related to fulfilling their roles as an ATS, which corresponds to the work of Stigler et al.[24] who reported academic stress (workload, clinical responsibilities, etc.) as the primary concern for ATSs.

The terms stress and burnout are often used interchangeably; however, the two are different, and are often differentiated by physical versus emotional exhaustion, as well as duration of those stressors. Stress is the body's response to a stimulus, but is often a result of an individual being overwhelmed by multiple roles, demands, and responsibilities. A person who is experiencing stress is still able to manage his or her responsibilities. Burnout is more characterized by a lack of interest and motivation for once enjoyable tasks. Often burnout causes a void of feelings, emotions, and abilities to perform once easy tasks. Chronic stress from too many responsibilities is often a precursor to burnout, and for the AT, it stems from long work hours, limited personal time, high workload, and role strain.[2,4,6,32] Our results corroborate previous research, linking workload and a lack of personal time, as major factors related to elevated stress and burnout.[5-6] As illustrated by our data, ATSs feel the most stress due to the *time*-related constraints required to balance their rigorous academic loads and clinical responsibilities with making time for outside activities and obligations. While many discussed the state of current stressors, they also indicated that many of the stressors were developing, and if not alleviated, would result in burnout. *Role strain*, a conflict manifested when an individual has difficulty meeting a variety of personal/professional obligations most often due to the time necessary to fulfill them, appears to best describe the experiences of burnout for ATSs. This is consistent with previous research on burnout,[4,15] work family conflict (WFC),[33] and role strain[34-36] within athletic training, which can be predicted by the number of hours worked. Interestingly, the 2 ATSs who did not report experiencing burnout, cited *social support* as the primary reason for its absence. The 2 students who did not experience burnout, worked similar clinical hours as the other participants, but appeared to be more aware of their thresholds for stress, and were able to prevent burnout through social support and other stress management techniques. This supports other research, which illustrates strong social support and peer support as mitigating role stress[37] and increasing life balancing.[38]

Personal time and *social support* were the 2 major strategies that emerged as effective coping mechanisms for this group of ATSs. Taking advantage of personal time with exercise, extracurricular activities, and leisure activities, is often advocated as an effective stress management technique and a common coping mechanism utilized by graduate assistant athletic trainers.[39] Taking time away from the role of an ATS was seen as a way to rejuvenate and refocus for this particular group of students. Capitalizing on personal time as a method of rejuvenation was documented as an essential component for the AT to remain committed to their

roles as an AT at the secondary level[40] and to avoid the pitfalls of burnout from job overload. Moreover, the concept of time spent in activities outside the profession was recommended by Hunt[41] as an important coping response for prevention of burnout, and has been cited multiple times within editorials[32,42] and empirical research studies[24,38-39] as important for athletic training professionals to evade burnout. Soliciting and protecting personal time is also documented as an important way to promote a balanced lifestyle for athletic training professionals.[38,42] Therefore, strategies such as saying "no" and prioritizing time during the day for personal obligations are also important stress reducing strategies.

The concept of *social support*, particularly through one's peers, has not only been viewed as an influential factor in alleviating the role strain among dual-position ATs at the high school level,[34] but also as an important aspect to the socialization of one's role in the work place, [43] persistence in an athletic training degree program,[44] a means to successful balance one's professional and personal lives,[38] and as an effective coping strategy for work stress for Division I graduate assistant athletic trainers.[39] In a study investigating work life balancing in the Division I clinical setting,[38] social support was important on multiple levels, including at the workplace and in an AT's personal life. The concepts of teamwork and mutual understanding regarding job-related demands and responsibilities and the willingness to help out a peer were fundamental for the AT to have more personal time. Furthermore, support and understanding from a network of family and friends outside of the profession allowed the Division I AT to find a sense of normalcy, thus achieving a more balanced lifestyle. Camaraderie among fellow ATSs can often help the student look beyond the stressful situation, or at best feel supported and not isolated, while managing their assignments and responsibilities. Several participants' statements directly relating social support as important in stress reduction and management of their responsibilities support this theory. Moreover, the positive interactions among peers, work life balance, and burnout prevention strategies were also linked to professional role maintenance.[40]

The ATSs who participated in this study were acutely aware that burnout is a major concern for the profession. Burnout, which is often a precursor to job dissatisfaction and eventual attrition, can be prevented. Providing ATSs with knowledge regarding the signs and symptoms of burnout, as well as effective strategies to manage and cope with the condition, will empower them to be proactive and avoid the negative consequences of prolonged stress. The most effective strategies appear to have overlapping purposes, and it may be assumed that a reduction in stress may create a balanced lifestyle and reaffirm a professional's commitment to their roles and responsibilities.

Implications

Our results corroborate previous research regarding sources of stress, burnout among athletic training professionals, and effective coping strategies to manage stress and reduce experiences of burnout. Table 3 highlights key strategies for both ATSs and their academic programs. Students are encouraged to develop an enriching social support network, which includes peer ATSs, family, and friends outside of the profession of athletic training. A few of the participants in this study provided insightful examples for social support, including AT club intramural teams (basketball, flag football, etc.), scheduled movie nights with roommates, and study-free nights. Furthermore, ATSs need to develop effective time management skills (to-do lists, multi-tasking, prioritizing) and develop healthy habits such as a proper diet and exercise to help alleviate stress and potentially prevent burnout. Many of the participants discussed scheduling time during each day to reduce stress, and that failure to include this time was correlated with

Table 3. Recommendations for Reducing Burnout in ATS

Education Programs/Personnel

1. Encourage participation in outside activities.
2. Continue to follow CAATE guidelines for days off.
3. Educate ATSs on the signs and symptoms of burnout (exhaustion, lack of motivation, depression, change in sleep patterns, etc.).
4. Educate ATSs on effective stress management techniques (meditation, exercise, set boundaries, proper diet, sleeping habits, etc.).
5. Encourage and promote communication between all members of the athletic training education program including the student, clinical instructors, and program staff.
6. Establish a mentorship program (peer or with clinical instructor) to help promote support networks for students.

Athletic Training Student

1. Utilize time management strategies (plan ahead, to do lists).
2. Set a schedule or routine.
3. Take time to reward yourself (things to look forward to after a challenging week).
4. Take advantage of support networks.
5. Develop effective stress management activities.
6. Communicate with program personnel (clinical instructors, academic faculty).

higher levels of stress and feelings of burnout. Athletic training educators and program personnel are encouraged to provide students with a support system or strategies to find one, elicit communication between all members of the education team (clinical instructor, student, etc.), and promote healthy habits for their students.

Limitations and Future Research

Our study utilized a web-based management system to facilitate and collect data. Although a viable data collection tool, we did not conduct follow-up phone interviews to clarify or confirm responses to the questions posted on-line. Steps, including a pilot study, however, were taken to reduce the chance for misinterpretation of the questions posted. Despite this inclusion, future authors are encouraged to incorporate multiple mediums of data collection, including in-person interviews or focus group sessions to confirm the study's findings. While our results appear to support the work of Riter el al.[7] and indicate that burnout is affecting ATSs, the data is limited to a small, regionally biased sample group. Future investigations should include a national random sample of ATSs to confirm the emergent data presented here. The data collected and presented in this paper were only accumulated at one point in time, and therefore do not take into consideration time of year influences. A longitudinal study may more accurately assess students' experiences of burnout, as suggested by Stigler *et al.*,[24] stress for an ATS is often impacted by the time of year (ie, mid-terms, finals). Moreover, the findings presented were based upon the participants' reflections, opinions, and perceptions of burnout. Although they were asked to define burnout, and the definitions were fairly accurate, what they may interpret as burnout personally may in actuality only be high levels of stress and not genuine burnout. Future inquiries may need to distinguish more clearly between stress and burnout to better understand ATSs' experiences. Finally, there is a marked connection between burnout and retention.[33] Therefore, it is important to ascertain whether burnout experienced during academic preparation influences the student's entrance into the workplace and/or selection of graduate work/studies. A recent study[45] highlights that the number of hours worked is a precursor to burnout,[4] and a major influence for the ATS and recent graduate to not enter the workforce.

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APPENDIX. Interview Guide

1. What attributes drew you to the career of athletic training?
2. What do you like the least about the profession of athletic training?
3. Where do your greatest sources of stress come from?
4. How to you cope during stressful times?
5. Define the concept of burnout?
6. Based upon your description or definition of burnout please discuss whether you have ever experienced it and what factors contributed to your experiences (if not why not)?
7. Do you think burnout is a concern for the profession of athletic training (please explain)?
8. What issues or concerns are facing the profession of athletic training?
9. What can be done to prevent the occurrence of burnout in the work place?
10. Where do you see yourself in 5 years (post graduation/schooling) and why?
11. What has influenced your career choice/career path (as discussed in the previous question)?