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Working Hours, Sleep, and Burnout Among Athletic Trainers Employed in College Athletics: A Cross-Sectional Study

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Abstract

Purpose: Burnout continues to be an important concern for athletic trainers working in the collegiate sport setting. The purpose of the study was to examine the relationships between working hours, sleep, and burnout among athletic trainers providing patient care in the collegiate setting. **Methods:** A web-based (Qualtrics, Provo, UT) cross-sectional study using a self-reported questionnaire was used to collect demographics and data on working hours, sleep, and burnout. The Copenhagen Burnout Inventory (CBI) was used to determine burnout. **Results:** The mean age of our participants (n=1006) was 33 ± 9 years; 37.6% (n=378) were male, 61.5% (619), and 1.1% (n=9) chose not to identify. Participants reported moderate burnout (61.55 ± 12.59) on the CBI, additionally a mean score of 66.41 (± 13.42) on the personal-related subscale, 63.91 (± 13.35) on the work-related subscale, and 53.94 (± 19.75) on the client-related subscale. Working more than 50 hours per a week caused collegiate athletic trainers to experience higher levels of personal and work-related burnout (67.34 (± 13.30) and 64.86 (± 13.64) respectively) as compared to those who worked less than 49 hours per week (63.54 (± 13.40) and 60.95 (± 11.96) respectively). Participants report an average of 6.77 (± .95) hours of sleep per night. Those who report less than 6.9 hours of sleep per night scored a mean of 70.48 (± 13.58) on the personal-related subscale, whereas those who report more than 7 hours of sleep per night scored a mean of 63.97 (± 12.71). **Conclusions:** Overall, athletic trainers in the collegiate setting are experiencing moderate levels of burnout. Athletic trainers who worked over 40 hours a week and slept less than 7 hours per night had higher levels of burnout. Sleep is an important factor in recovery and likely a strategy to prevent burnout.

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ABSTRACT

Purpose: Burnout continues to be an important concern for athletic trainers working in the collegiate sport setting. The purpose of the study was to examine the relationships between working hours, sleep, and burnout among athletic trainers providing patient care in the collegiate setting. **Methods:** A web-based (Qualtrics, Provo, UT) cross-sectional study using a self-reported questionnaire was used to collect demographics and data on working hours, sleep, and burnout. The Copenhagen Burnout Inventory (CBI) was used to determine burnout. **Results:** The mean age of our participants ($n=1006$) was 33 ± 9 years; 37.6% ($n=378$) were male, 61.5% (619), and 1.1% ($n=9$) chose not to identify. Participants reported moderate burnout (61.55 ± 12.59) on the CBI, additionally a mean score of $66.41 (\pm 13.42)$ on the personal-related subscale, $63.91 (\pm 13.35)$ on the work-related subscale, and $53.94 (\pm 19.75)$ on the client-related subscale. Working more than 50 hours per a week caused collegiate athletic trainers to experience higher levels of personal and work-related burnout ($67.34 (\pm 13.30)$ and $64.86 (\pm 13.64)$ respectively) as compared to those who worked less than 49 hours per week ($63.54 (\pm 13.40)$ and $60.95 (\pm 11.96)$ respectively). Participants report an average of $6.77 (\pm .95)$ hours of sleep per night. Those who report less than 6.9 hours of sleep per night scored a mean of $70.48 (\pm 13.58)$ on the personal-related subscale, whereas those who report more than 7 hours of sleep per night scored a mean of $63.97 (\pm 12.71)$. **Conclusions:** Overall, athletic trainers in the collegiate setting are experiencing moderate levels of burnout. Athletic trainers who worked over 40 hours a week and slept less than 7 hours per night had higher levels of burnout. Sleep is an important factor in recovery and likely a strategy to prevent burnout.

Key Words: Workplace stressors, self care, work demands

INTRODUCTION

Burnout is a condition that continues to impact individuals working in the healthcare and sport industries.^{1,2} The condition is hallmarked by feelings of physical and emotional exhaustion, that is associated with one's life and work stressors.³ Burnout has been studied since 1970s^{1,2} as a concept and consequence of working with people. As researchers continue to better understand burnout, the definition of and causative factors have been better conceptualized. Today, burnout is understood to be a condition that manifests when prolonged stress creates emotional and physical fatigue/exhaustion that is rooted in our lives, work, and/or work with patients³. Athletic trainers experience burnout, but recent research suggests that burnout is caused by work and life roles, and not patient based interactions.^{4,5} This implies that the athletic trainer does not perceive stress from those interactions, but rather from the demands placed upon them from their personal and work roles.

Experiences of burnout are concerning for any individual and can negatively impact their mental health and wellness^{6,7} as well as result in insomnia, depression and other physical symptoms⁶. For healthcare professionals it can also be detrimental to the medical care they provide their patients and athletes.⁸ For healthcare professionals, medical errors, and overall medical performance have been negatively impacted when experiencing burnout.⁸ Athletic trainers are credentialed healthcare providers who work with physically active individuals under the supervision of or in collaboration with a physician.⁹ Over 19% of all athletic trainers work in the collegiate practice setting,¹⁰ an employment setting that is characterized by long working hours¹¹ with unrealistic expectations of its employees to sacrifice their time (e.g. weekend hours, nights).¹¹⁻¹³

Although burnout has been studied extensively in athletic training, with most of the literature focused on the collegiate practice setting,¹⁴ much is still unknown about causative factors of burnout. A recent systematic review⁷ suggests that burnout occurs due to role strain and work-family conflict; constructs that are time and demand based. Athletic trainers report working long hours,¹⁵ and a recent study of healthcare workers found that as hours worked per week surpassed 40, experiences of burnout increased.¹⁶ Moreover, athletic trainers report working longer hours during their team's peak season, compared to the off-season,¹⁵ something that has yet to be explored in conjunction with burnout. There is also evidence that sleep can mediate the experiences of burnout for healthcare workers.¹⁶ Poor sleep quality as well as quantity of sleep has been linked to experiences of burnout in medical students, but has yet to be examined in burnout studies within athletic training.^{7,18} Sleep is restorative and necessary for one's overall health, mental clarity, and well-being; and perhaps a barrier to experiences of burnout. The purpose of this cross-sectional study, therefore, will be to examine burnout among athletic trainers who are employed within the collegiate setting. Specifically, we are interested in better understanding the relationships between working hours, sleep, and burnout. We hypothesized the following:

H1: Athletic trainers who work greater than 40 hours per week will report increased overall, personal and work-related burnout.

H2: Athletic trainers who report 7 or more hours of sleep a night will report lower levels of overall, personal and work-related burnout.

H3: Athletic trainers who are satisfied with the number of hours of sleep they get each night will report lower levels of overall, personal, and work-related burnout.

H4: Athletic trainers who are satisfied with the time they have to engage in self-care practices will report lower levels of overall burnout, personal, and work-related burnout.

METHODS

Study Design and Setting

A web-based (Qualtrics, Provo, UT) cross-sectional study using a self-reported questionnaire was used to evaluate burnout among collegiate athletic trainers. The self-administered questionnaire was used to collect data on working hours, sleep, and burnout among collegiate athletic trainers. The Copenhagen Burnout Inventory (cite CBI) was used as it is a reliable, valid measure of burnout and has been used more recently in athletic training^{5,19,20}. We did not alter any of the questions due to the instrument's strong psychometric properties. Institutional review board approval was obtained prior to data collection, which occurred over a four-week period in the Fall of 2022.

Population

The mean age of our participants (n=1006) was 33 \pm 9 years; 37.6% (n=378) were male, 61.5% (619), and 1.1% (n=9) chose not to identify. The sample of athletic trainers on average were credentialed, certified athletic trainer for 9 \pm 9 years. Across all participants, average weekly working hours were 56 \pm 13 (range 0-100). Table 1 provides a summary of hours worked.

Table 1. Hours Worked

<40 hours per week	40-50 hours per week	>50 hours per week
4 (0.5%)	264 (26.2%)	738 (73.3%)

Study Measures**Demographic Data**

Participants were asked a series of questions related to their age, years of experience as an athletic trainer, years employed at current higher education institution, National Collegiate Athletic Association (NCAA) division, and hours worked per week (over the last month) of their sport/medical coverage (Table 2).

Table 2. Subject Characteristics

Characteristic	Frequency	Percent
	n	%
Age		
Years of Experience		
Gender		
Male	378	37.6
Female	619	61.5
Transgender Female	1	0.1
Gender Variant	4	0.4
Not listed	1	0.1
Prefer not to answer	3	0.3
Level of education		
Bachelors	97	9.6
Masters	877	87.2
Doctorate	32	3.2
Ethnicity		
American Indian	2	0.2
Asian or Pacific Islander	17	1.7
Black	31	3.1
Hispanic	45	4.5
Multiethnic	26	2.6
White	874	86.9
Seven	8	0.8
Missing	3	0.3
Division		
Division 1	575	57.2
Division 2	191	19
Division 3	240	23.9
Marital Status		
Single	504	50.1
Cohabiting	91	9
Married	382	38
Divorced	14	1.4
Widowed	2	0.2
Engaged	13	1.3
Total	1006	100

Sleep

To measure the quantity of sleep we asked participants to share the average hours of sleep per night (over the last month). To assess satisfaction associated with their sleep we asked participants “how often they are satisfied with the amount of sleep they get each night (last month)” --1(always), 3 (sometimes), and 5 (never/almost never).

Burnout Measurement

The CBI was incorporated to measure burnout among the sample. The 19-item scale demonstrates strong reliability ($\alpha=.85-87$) and has been used previously in athletic training¹⁹, as well as sport¹². The CBI was selected to better understand the categories of burnout: personal, work, and client³. Burnout has been shown to be complex construct, and physical and psychological exhaustion can manifest from different sources: personal (experiences related to person’s life stressors), work (stress perceived from one’s job/career), and people or clients (perceptions of stress related to engaging with others at work)³.

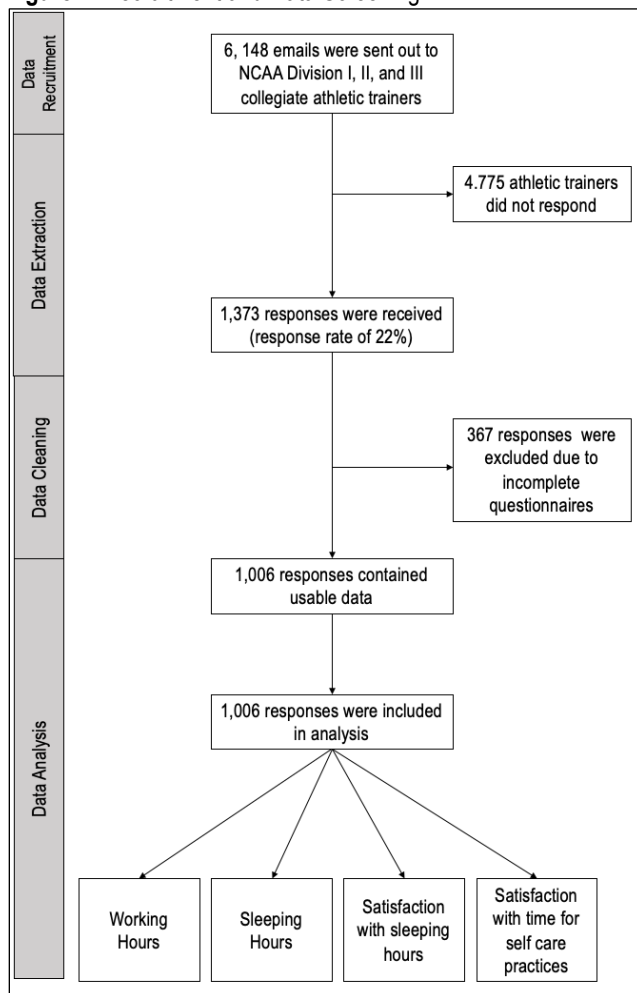
The 3 subscales are totaled (0 to 100), with lower scores indicating lower levels of burnout. The overall scale is scored on a 5-point Likert scale: personal burnout (6-items in total), work-burnout (7 total items), and client-related burnout (6-items). Personal burnout responses are 100 (always), 75 (often), 50 (sometimes), 25 (seldom), and 0 (never/almost never). For work and client-related burnout items are rated using 100 (to a very high degree), 75 (to a high degree), 50 (somewhat), 25 (to a low degree), and 0 (to a very low degree). Table 3 highlights the CBI scale items.

Table 3. The Copenhagen Burnout Inventory Questionnaire and Scores

Question	Score (Mean \pm SD)
Personal Burnout	66.41 (13.42)
How often do you feel tired?	73.16 (17.15)
How often are you physically exhausted?	68.68 (16.20)
How often are you emotionally exhausted?	71.57 (18.91)
How often do you think “I can’t take it anymore”?	58.77 (26.73)
How often do you feel worn out?	69.38 (18.04)
How often do you feel weak and susceptible to illness?	56.98 (26.82)
Work Burnout	63.91 (13.35)
Is your work emotionally exhausting?	67.01 (20.76)
Do you feel burnt out because of your work?	64.50 (25.87)
Does your work frustrate you?	64.69 (22.55)
Do you feel worn out at the end of the working day?	71.60 (19.26)
Are you exhausted in the morning at the thought of another day of work?	61.93 (25.90)
Do you feel that every working hour is tiring for you?	55.67 (27.32)
Do you have enough energy for family and friends during liesure time?	62.00 (18.78)
Client Burnout	53.94 (19.75)
Do you find it hard to work with clients?	50.05 (30.90)
Do you find it frustrating to work with clients?	50.45 (29.70)
Does it drain your energy to work with clients?	52.26 (28.50)
Do you feel that you give more than you get back when you work with clients?	67.21 (24.72)
Are you tired of working with clients?	47.27 (30.87)
Do you sometimes wonder how long you will be able to continue working with clients?	56.36 (30.65)
Total	61.55 (12.59)

Study Procedures

To recruit potential participants working in the NCAA college setting, a list of colleges/universities offering NCAA athletic programs was developed using Schools Index, 2022. That list had 1676 NCAA colleges/universities, and from that list the athletics staff directory websites were found to find email contacts of all staff athletic trainers. This process led us to find 6,148 emails of certified athletic trainers working in the NCAA collegiate setting. Prior to launching the survey, we had 3 athletic trainers pilot the study’s procedures for face validity. We did not make any changes to the study’s protocol or survey after the pilot study. During the Fall of 2022, emails were sent to our potential participants over a four-week period with 1-week, and 4-week reminders sent. We had 1373 responses (22% response rate), and 1006 were usable for data analysis (73% completion rate).

Figure 1. Recruitment and Data Screening**Data Analysis**

Data was downloaded into Excel (Microsoft Corporation), the data was then filtered, extracting those who did not complete the scales to the required threshold, and those who did not complete more than 80% of the survey. The responses that remained were then analyzed utilizing IBM SPSS Statistics for Macintosh (version 24.0). Demographic variables such as age, gender, marital status, division, and years of experience were collected. Demographic information is presented in means and standard deviations determined by descriptive and frequency statistical analyses. The Copenhagen burnout inventory was the dependent variable collected.

Participants were dichotomized into groups to effectively analyze the hypotheses. For hypothesis one, participants were split into two groups where the first was those who worked less than or equal to 40 hours per week, where the second group were those who worked 41 plus hours per week. Regarding hypothesis, two participants were grouped based on the average number of hours of sleep they report per night, the first group is less than or equal to 6.9 hours per night, and the second group is greater than or equal to 7 hours per night.

Mann-Whitney U analyses were utilized, as non parametric data is present, to identify differences in CBI total and subscales, between groups (average hours of work, and sleep). Non-parametric ANOVA such as a Kruskal-Wallis H test was utilized to determine differences between groups, regarding the overall CBI, personal and work subscales. Dunn's post hoc analyses were utilized to determine where the differences lie within groups. An a priori value for significance was set at $p < .005$ prior to statistical analysis.

RESULTS

Participants reported moderate burnout (61.55 ± 12.59) on the CBI, additionally a mean score of $66.41 (\pm 13.42)$ on the personal-related burnout subscale, $63.91 (\pm 13.35)$ on the work-related subscale, and $53.94 (\pm 19.75)$ on the client-related subscale. We found no cases of severe burnout, but 72% of our sample reported moderate levels of burnout ($n=709$). Table 4 highlights the categories of burnout for our sample.

Table 4. Severity of Burnout Experienced by College Athletic Trainers

Category	Frequency	Percent
	n	%
Low	158	15.7
Moderate	724	72
High	124	12.3
Severe	0	0

Of our sample of college athletic trainers 50.1% were single, 38% were married, the remaining 11.9% are those who were cohabitating, divorced, widowed, and engaged. A large majority of participants (73%) did not have children, where 27% of participants did have children.

Those who work less than or equal to 40 hours per week scored a mean of $59.83 (\pm 14.67)$ on the personal-related burnout subscale, a $58.92 (\pm 12.57)$ on the work-related burnout subscale and a $58.13 (\pm 12.08)$ on the overall burnout scale. Those who work 41 or more hours per week scored a mean of $66.66 (\pm 13.32)$ on the personal-related burnout subscale, a $64.09 (\pm 13.36)$ on the work-related burnout subscale and a $62.04 (\pm 12.52)$ on the overall burnout scale. A Mann-Whitney U test revealed a statistically significant ($U= 13049.0$, $p=.010$) difference between the two groups on the personal-related burnout subscale. Mann-Whitney U tests revealed that individuals who worked 41 or more hours per week scored statistically significantly higher on the personal-related burnout subscale ($U=46012.00$, $p=.003$), on the work-related burnout subscale ($U=44889.5$, $p<.001$), and finally on the overall burnout inventory ($U=45529.5$, $p=.002$) compared to those who worked less than or equal to 40 hours per week. These results accept the first hypothesis.

Participants report an average of $6.77 (\pm .95)$ hours of sleep per night. Those who report less than 6.9 hours of sleep per night scored a mean of $70.48 (\pm 13.58)$ on the personal-related burnout subscale, whereas those who report more than 7 hours of sleep per night scored a mean of $63.97 (\pm 12.71)$. A statistically significant difference ($U=82030.5$, $p<.001$) was identified by utilizing a Mann-Whitney U test. Participants who report less than 6.9 hours per night score a mean of $66.50 (\pm 13.65)$ on the work-related burnout subscale and a mean of $64.30 (\pm 12.86)$ on the total CBI. Those who report more than 7 hours of sleep per night report a mean score of $62.43 (\pm 12.79)$ on the work-related burnout subscale, and a mean score of $59.95 (\pm 12.01)$ on the total CBI. A Mann Whitney U yielded statistically significant differences between groups within the work-related sub scale ($U= 94724.00$, $p<.001$) and on the total CBI ($U=88937.5$, $p<.001$). This result accepts the second hypothesis.

Participants reported their satisfaction with sleep, and satisfaction with their ability to participate in self care on a 5-point Likert scale (1: always, 5: never). Participants were then grouped based on these answers; always/often, sometimes, seldom/never. Table 5 represents the mean scores on the CBI and subscales, reported by each group of sleep satisfaction. A Kruskal-Wallis H test resulted in significant differences ($\chi^2[2]=172.97$, $p<.001$) between these three groups within the personal-burnout subscale. Pairwise comparisons using Dunn's post hoc revealed those who are always/often satisfied with their sleep scored significantly ($p<.001$) lower than those who sometimes ($p<.001$) and those who seldom/never ($p<.001$) are satisfied with their sleep. There were significant differences ($\chi^2[2]=86.11$, $p<.001$) identified between groups within the work-related subscale. Those who were always/often satisfied with their sleep scored significantly ($p<.001$) lower than those who sometimes ($p<.001$) and those who seldom/never ($p<.001$) satisfied with their sleep. Finally, significant differences ($\chi^2[2]=126.98$, $p<.001$) were identified between groups within the CBI total score. Pairwise comparisons resulted in those who were always/often satisfied with their sleep scored significantly ($p<.001$) higher than those who are sometimes ($p<.001$) and those who are seldom/never ($p<.001$) satisfied with their sleep. These results accept the third hypothesis.

Table 5. Mean and SD for Sub Groups and Scores on the CBI

	Personal-Burnout Subscale (Mean ± SD)	Work-Related Subscale (Mean ± SD)	Overall CBI (Mean ± SD)
Sleep Satisfaction			
always/often	59.78 ± 12.43	58.65 ± 13.27	56.00 ± 11.28
sometimes	67.54 ± 11.92	65.22 ± 12.28	62.63 ± 12.63
seldom/never	73.65 ± 12.68	69.00 ± 12.58	67.39 ± 11.35
Time for self-care satisfaction			
always/often	55.45 ± 13.04	53.66 ± 15.36	51.00 ± 13.90
sometimes	64.26 ± 11.87	61.84 ± 11.37	59.80 ± 11.33
seldom/never	71.81 ± 12.23	69.01 ± 12.00	66.45 ± 10.73

Table 5 represents the mean scores on the CBI and subscales, reported by each group of satisfaction of time available to participate in self-care activities. A Kruskal-Wallis H test resulted in significant differences ($\chi^2[2]=172.52$, $p<.001$) between these three groups within the personal-burnout subscale. Pairwise comparisons using Dunn's post hoc revealed those who are always/often satisfied with their availability to participate in self-care activities scored significantly ($p<.001$) lower than those who sometimes ($p<.001$) and those who seldom/never ($p<.001$) satisfied. Significant differences ($\chi^2[2]=139.13$, $p<.001$) were identified between groups within the work-related subscale utilizing a Kruskal-Wallis H test. Those who were always/often satisfied with their availability to participate in self-care activities scored significantly ($p<.001$) higher than those who sometimes ($p<.001$) and those who seldom/never ($p<.001$) satisfied. Lastly, significant differences ($\chi^2[2]=157.85$, $p<.001$) were identified between groups within the CBI total score. Pairwise comparisons resulted in those who were always/often satisfied with their availability to participate in self-care activities scored significantly ($p<.001$) higher than those who are sometimes ($p<.001$) and those who are seldom/never ($p<.001$) satisfied. These results accept the fourth hypothesis.

DISCUSSION

Burnout continues to be an identifiable concern for athletic trainers.^{21,22} Despite the growing interest in the field of athletic training, much more research is needed to better understand factors that contribute to its occurrence. Working hours are cited frequently as a contributing factor to work-family conflict²³ a stressor faced by many athletic trainers and also a precursor to burnout among athletic trainers.¹³ Sleep is also a stress relieving strategy, and an understudied construct in athletic training.

Moderate levels of burnout were reported by participants, which is comparable to the current literature on burnout in athletic training. Participants slept on average 6.7 hours per night, the first documentation to our knowledge of sleep for athletic trainers. Results suggest that athletic trainers sleep on average similar to nurses (6.7 to 6.9 a night), and less to physicians (6.2 hours per night).¹⁶

Hours Worked and Experiences of Burnout

Overall, this sample of athletic trainers in the collegiate setting are experiencing moderate levels of burnout. Of note, a small percentage (12%) of the sample reported experiencing severe/high levels of burnout. Due to this finding, burnout is an emergent concern for the profession of athletic training, especially among those employed in the collegiate setting. In a recent study looking at the secondary school setting less than 2% of the sample was classified as having high levels of burnout²³. When comparing findings to other studies examining burnout using the CBI scale, the overall mean score in this sample is much higher.^{5,19,24} The literature describes the role of the athletic trainer as complex, stressful, and often with long working hours, all factors that are predictive of burnout.²⁵ The role of the athletic trainer in the collegiate setting has also been described as demanding, with experiences of role incongruence and role strain.^{5,26}

Over 73% of this sample reported working 50+ hours per week and only 4 athletic trainers from this sample reported working less than 40 hours a week on average. Although working long hours is not atypical for an athletic trainer working in the college setting (Kania et al.), the sample's average of 56 hours per week is more than nurses, hospital technicians and hospital administrators¹⁶. Additionally, the working hours of an athletic trainer extend beyond normal business hours, and often include nights and weekends;²⁵ this is unique to those working in sport (coaches, athletic trainers), or healthcare (nurses, doctors). This limits the time an athletic trainer may have to engage in self-care activities, find time to decompress,²⁷ and rejuvenate to complete their daily life responsibilities as well as their work.^{7,28} Thus, it is not surprising that the first hypothesis was confirmed.

Sleep and Experiences of Burnout

Sleep is an important part of one's overall health, and can improve one's overall mental health.²⁹ Experiences of burnout can have a negative impact on an individual's mental health and wellness, and to our knowledge sleep has yet to be explored within the profession of athletic training. The Center for Disease Control and Prevention (CDC) suggests adults should get between 7 and 9 hours per night.^{30,31} Participants reported sleeping less than what the CDC recommends per night. As previously mentioned, this sample reported sleeping less than physicians, but comparable to nurses.

Athletic trainers who slept 7 or more hours a night reported lower levels of overall, personal, and work-related burnout. Sleep is only one aspect of the burnout construct, but it does provide a platform¹⁸ for one to recharge their internal battery.¹⁷ Burnout is a condition in which one is fatigued mentally and physically, thus when the individual is able to get restorative sleep, they are more likely to reduce the experiences of burnout and its negative impact.³² Sleeplessness is a consequence of burnout (Olgseby et al. 2020), and because our sample was found to sleep less than the recommended amount as well as score in the moderate levels of burnout more is needed on this topic.

In addition to the quantity of sleep, sleep quality or satisfaction with hours slept is also an important part of managing burnout. Giorgi et al. found a relation between sleep quality and burnout in hospital nurses, showing that poor sleep quality can lead to burnout and consequently can have negative effects on job performance.³³ We found that collegiate athletic trainers who reported that they were satisfied with the amount of sleep they received each night scored lower on overall, personal and work related burnout. We recognize that despite recommendations for the number of hours slept per night, the need for sleep is dependent upon the individual themselves.³⁴ This is why we included a question about satisfaction of sleep, in addition to quantity of sleep. If an athletic trainer's perceptions of sleep quality are satisfied, then it allows them to feel ready to face the daily challenges they may face, and thus reduce the experiences of stress and burnout. Sleep is a self-care practice that helps a person maintain their quality of life, thus if one believes they are getting enough sleep then they may be able to manage their stress daily, thus reducing experiences of burnout.²⁰

Self-Care Practices and Experiences of Burnout

Engaging in self-care practices is viewed as an effective strategy to reduce the demands of working in healthcare.³⁵ Self-care, although not the only strategy to prevent burnout, is viewed as a practice that promotes personal rejuvenation and mental fortitude. Self-care practices are categorized into different components, including physical, emotional, and spiritual,³⁶ and can be different for every person as it aligns with their identity, personal interests, and own stress management strategies. A recent study found that self-care practices were interrelated to work-life balance for athletic trainers³⁷ and thus we believed could be a factor in experiences of burnout. We found that athletic trainers who have or make the time to take care of themselves reported lower levels of burnout. This suggests that when an athletic trainer has time to recharge their internal battery through self-care, they are more likely to reduce their level of stress, and thus their experiences of burnout.

Limitations

This study is not without limitations. First, this sample is only representative of those athletic trainers working in the collegiate setting. Although this represents a large number of athletic trainers working in the profession, it does not represent all employment settings. Future research should include additional employment settings to better understand if these findings are representative of athletic trainers employed in other settings and the impact of working hours on burnout. Second, data were collected during the Fall semester. For athletic programs who do not have a competitive in-season during the Fall, the hourly demands on the athletic trainer may be less.

Recommendations for Future Research

Future research must not only include longitudinal data, but also a single-time point during the Spring semester for a comprehensive understanding of burnout and time of year. Finally, sleep is a new area of study for the athletic training profession, and very little is known about sleep habits and practices of the athletic trainer and its relationship to stress and burnout. Future research should include an exploratory, qualitative study to better understand sleep.

CONCLUSIONS

Our results suggest that working hours are a strong predictor of burnout for athletic trainers working the collegiate practice setting. In the rawest form, the number of hours an athletic trainer must work to complete job duties is impacting experiences of burnout as it limits time for outside activities, or in combination of managing other life stressors creates overload. Additionally, sleeping and self-care practices were viewed as stress relieving, or in this case strategies to address burnout. Our respondents were experiencing moderate levels of burnout, and so heightening an athletic trainer's awareness of basic coping skills, as well as other strategies that can reduce their level of stress and burnout is necessary.

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