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original research

Physical Activity Participation and Constraints Among Athletic Training Students

Justin Stanek, EdD, ATC; Katherine Rogers, ATC; Jordan Anderson, MS, ATC

School of Kinesiology and Recreation, Illinois State University, Normal

Context: Researchers have examined the physical activity (PA) habits of certified athletic trainers; however, none have looked specifically at athletic training students.

Objective: To assess PA participation and constraints to participation among athletic training students.

Design: Cross-sectional study.

Setting: Entry-level athletic training education programs (undergraduate and graduate) across the United States.

Patients or Other Participants: Participants were 1125 entry-level athletic training students.

Main Outcome Measure(s): Self-reported PA participation, including a calculated PA index based on a typical week. Leisure constraints and demographic data were also collected.

Results: Only 22.8% (252/1105) of athletic training students were meeting the American College of Sports Medicine recommendations for PA through moderate-intensity cardiorespiratory exercise. Although 52.3% (580/1105) were meeting the recommendations through vigorous-intensity cardiorespiratory exercise, 60.5% (681/1125) were meeting the recommendations based on the combined total of moderate or vigorous cardiorespiratory exercise. In addition, 57.2% (643/1125) of respondents met the recommendations for resistance exercise. Exercise habits of athletic training students appear to be better than the national average and similar to those of practicing athletic trainers. Students reported structural constraints such as lack of time due to work or studies as the most significant barrier to exercise participation.

Conclusions: Athletic training students experienced similar constraints to PA participation as practicing athletic trainers, and these constraints appeared to influence their exercise participation during their entry-level education. Athletic training students may benefit from a greater emphasis on work-life balance during their entry-level education to promote better health and fitness habits.

Key Words: exercise, leisure constraints, leisure-time exercise questionnaire, work-life balance

Key Points

- Athletic training students experienced similar constraints to physical activity participation as practicing athletic trainers.
- Structural constraints, such as lack of time due to work or studies, were the most significant barriers to exercise participation.
- Emphasizing work-life balance to athletic training students may promote greater opportunities for physical activity participation as both students and future professionals.

Increased emphasis continues to be placed on physical activity (PA) in society as the rates of various preventable diseases have risen as a result of the obesity epidemic.[1–4] Health care professionals are often asked to lead the initiative to promote PA participation. Many health care professionals are educated in the intricacies of PA, and research[5] has shown that they are more likely to educate patients in the importance of PA if they engage in healthy lifestyle habits themselves. Athletic trainers (ATs) are especially versed in the many aspects of physical fitness, such as exercise program creation, flexibility, muscular strength, cardiorespiratory endurance, fitness testing, and conditioning principles.[6]

Athletic trainers typically work in settings where they are sought out for fitness advice and often serve as role models for good PA habits. However, Cuppett and Latin[7] showed that 16% of ATs participated in no PA. They also demonstrated that despite an AT's additional knowledge, male ATs did not participate in PA any more frequently than the general population, whereas female ATs exercised more than the general population.[8] A similar and more recent study[9] showed that ATs as a whole are more physically active than the general population but still fall short of the American College of Sports Medicine (ACSM)–recommended guidelines.[10] Although investigators have looked at the PA habits of practicing ATs, the PA habits of undergraduate athletic training students (ATSs) are unknown. However, nursing students, like ATSs, complete required clinical education hours. Only 17.4% of first-year nursing students, compared with 25.5% of first-year students in other disciplines, met the ACSM recommendations for PA.[5] Factors associated with the nursing major, such as the extensive theoretical and practical class schedules, were identified as potential barriers affecting PA participation.[5] It is possible that these same factors affect ATSs.

Among the many perceived barriers to PA participation for ATs are irregular hours, travel, availability, amount of leisure time, and burnout.[9,11,12] Although these barriers have been cited by practicing ATs, it is unclear whether the

same barriers affect undergraduate ATSs. Previous researchers[13] have examined the work-life conflict of National Collegiate Athletic Association Division I ATs and found that ATs needed to "take time for themselves by being involved with outside interests." The inability to find a successful balance between work and home has contributed to attrition in working professionals.[14,15]

Undergraduate ATSs are often subjected to similar constraints as certified ATs, with the addition of class work. The accumulation of clinical education hours, along with class load and possibly a job, could present many barriers to PA participation. Therefore, the purposes of our study were to answer the following research questions: (1) What are the ideal and actual PA participation rates for ATSs? (2) Are ATSs meeting the ACSM–recommended levels of PA? (3) What are the perceived barriers to PA for ATSs? and (4) How do the PA habits of ATSs compare with those of practicing ATs?

METHODS

Participants

Athletic training students enrolled in an entry-level (bachelor's and entry-level master's) Commission on Accreditation of Athletic Training Education–accredited program were recruited to participate in the study. In April 2012, program directors at all 369 programs were contacted via e-mail and asked to forward the recruitment script to all students currently enrolled in their program. The recruitment script contained the informed consent document and the link to the online survey. The university's institutional review board approved the study.

Instrument

The survey instrument consisted of 38 items to determine demographic information, PA participation habits, and constraints to PA. Demographic information consisted of year in school; grade point average; age; sex; height; weight; self-reported body composition; body composition satisfaction; and average weekly hours spent in class, at the clinical assignment, and working for pay.

Physical activity participation habits were measured using the Leisure-Time Exercise Questionnaire[16] self-assessment scale. This measure was used to compare student results with those from Budruk et al[11] involving practicing ATs. The instrument asks participants to indicate how many times during an average week they engage in strenuous-, moderate-, and mild-intensity PA. This instrument also allows PA participation to be converted into a single measure using the following formula: Intensity = [(9 × strenuous) + (5 × moderate) + (3 × mild)].[16] This instrument has been used in numerous studies and has been shown to be reliable[1,16,17] and valid.[1,16–18]

We assessed constraints to leisure-time activity using the Leisure Constraints Scale.[19] Previous researchers[19] observed good internal consistency and reliability with this scale and reported a Cronbach α coefficient of 0.85. In the current study, the Cronbach α coefficient for the Leisure Constraints Scale was 0.86. The scale asks participants to rank 34 potential barriers to PA on a 7-point Likert scale ranging from 1 = *very unimportant* to 7 = *very important*. The scale assesses intrapersonal, interpersonal, and structural constraints to PA. *Intrapersonal constraints* refer to how such individual characteristics as attitudes, values, and beliefs detrimentally affect PA participation.[20] *Interpersonal constraints* arise from interactions with others, such as lack of social or family support.[20] *Structural constraints* are any barriers that arise from external conditions in the environment, such as money or accessibility concerns.[20] The survey was uploaded to a Web-based survey program using the SelectSurvey software program (version 4.081; Classapps, Inc, Normal, IL).

Pilot Study

Before deploying the survey, we pilot tested the survey on 30 ATSs from the host institution. Of these, 27 completed the survey (90% return rate), and the participants provided feedback for improving clarity of the items. Minimal editing of the initial survey version was performed before the surveys were e-mailed.

Procedures

We contacted program directors via e-mail and asked them to forward the recruitment script to all students currently enrolled in the athletic training education program. The recruitment script contained the informed consent letter, purpose of the study, and the URL hyperlink for the survey. Contact information for the primary investigator (J.S.) was also included in case participants had questions or comments about the research study. Survey completion was estimated to take 5–10 minutes. A follow-up message was sent to all program directors 2 weeks after the initial e-mail, reminding them to encourage their students to participate. The survey remained open for an additional 6 weeks after the follow-up message was sent.

Data Analysis

Results were downloaded from SelectSurvey to a spreadsheet for input into SPSS (version 18; SPSS Inc, Chicago, IL). Before data analysis, we calculated z-scores for all continuous variables; z-scores with an absolute value of 3.5 or higher were considered outliers[21] and coded as missing data in SPSS. Descriptive statistics, including frequencies, means, standard deviations, and ranges were calculated for the data. We used Pearson correlations to determine relationships between continuous variables. To explore relationships between categorical variables, χ^2 tests were conducted. Nonparametric statistical tests (Mann-Whitney U and Kruskal-Wallis) were used to determine if differences in PA participation were based on demographic characteristics. Finally, we used multiple regression analyses to determine if a relationship existed between the PA index and the independent variables. Statistical significance was set at $P < .05$ for all analyses.

RESULTS

A total of 1321 respondents opened and began the survey. Incomplete surveys (ie, no responses after a given question) were discarded from analysis, leaving a total sample of 1125. However, within this sample, some survey items did not require a response; therefore, the total responses for each survey item are reported in the tables. Frequencies

Table 1. Demographic Variables (Frequencies)

Variable	Number (%)
Type of athletic training education program (n = 1125)	
Undergraduate	1064 (94.6)
Entry-level master's	61 (5.4)
Sex (n = 1125)	
Male	409 (36.4)
Female	716 (63.6)
Class standing (n = 1092)	
Freshman	70 (6.4)
Sophomore	287 (26.3)
Junior	358 (32.8)
Senior	344 (31.5)
First-year graduate student	0 (0)
Second-year graduate student	33 (3.0)
Ethnicity (n = 1125)	
White	988 (87.8)
Black	35 (3.1)
Hispanic	44 (3.9)
Asian	29 (2.6)
American Indian/Alaskan Native	4 (0.4)
Other	13 (1.1)
Prefer not to answer	12 (1.1)
Body composition (n = 1125)	
Underweight	26 (2.3)
Normal	843 (74.9)
Overweight	240 (21.3)
Obese	14 (1.2)
Extremely obese	2 (0.2)
Satisfaction with body composition (n = 1125)	
Very dissatisfied	55 (4.9)
Dissatisfied	261 (23.2)
Somewhat satisfied	524 (46.6)
Satisfied	285 (25.3)
Body composition goal (n = 1125)	
Lose weight	603 (53.6)
Gain weight	106 (9.4)
Stay the same	285 (25.3)
No goal	131 (11.6)

(Table 1) and means and standard deviations (Table 2) are reported for the demographic data. Descriptive statistics for PA participation (Table 3), frequency of students meeting ACSM guidelines (Table 4), and constraints to PA participation (Table 5) are also provided.

The ATSs averaged 2.97 ± 1.98 days of cardiorespiratory exercise and 2.03 ± 1.81 days of resistance training per week. A difference was found between ideal (4.07 ± 1.64) and actual (2.97 ± 1.98) number of bouts of

Table 2. Demographic Variables (Descriptive Statistics)

Variable	Mean ± SD	Minimum	Maximum
Age, y	21.19 ± 0.71	18.00	39.00
Grade point average	3.39 ± 0.25	2.00	4.04
Height, cm	171.50 ± 9.50	152.40	203.20
Weight, kg	72.54 ± 14.91	44.45	163.30
Body mass index[a]	24.54 ± 3.87	15.02	48.43
Hours in class per wk	13.84 ± 6.69	0	42.00
Hours at clinical site per wk	15.85 ± 9.61	0	50.00
Hours working for pay per wk	4.72 ± 7.32	0	37.00

[a] Calculated as mass (kg)/height (m)^2.

Table 3. Self-reported Physical Activity Levels

Description	Mean ± SD
Number of days of physical activity in the past 7 d	
Cardiorespiratory	2.97 ± 1.98
Resistance training	2.03 ± 1.81
Vigorous activity in a typical wk	1.79 ± 1.85
Moderate activity in a typical wk	2.38 ± 2.04
Ideal number of days of physical activity in 7 d	
Ideal cardiorespiratory	4.07 ± 1.64
Ideal resistance training	3.15 ± 1.49
Time (min) performing physical activity in the past 7 d	
Vigorous activity	113.75 ± 148.39
Moderate activity	90.45 ± 107.51
Physical activity index[a]	34.82 ± 24.53

[a] Physical activity index = [(9 × strenuous) + (5 × moderate) + (3 × mild)].

cardiovascular activities per week (U = 427 880, z = −13.45, $P = .001$, $r = 0.40$) and between ideal (3.15 ± 1.49) and actual (2.03 ± 1.81) number of bouts of strength activities per week (U = 587 422, z = −2.99, $P = .003$, $r = 0.09$). In both cases, students' actual activity levels were significantly lower than their perceived ideal participation levels; however, the effect size was small.

On average, the ATSs reported obtaining 1.79 ± 1.85 days of vigorous activity and 2.38 ± 2.04 days of moderate activity per week. Both values are below the levels

Table 4. Frequency of Students' Meeting American College of Sports Medicine Guidelines for Exercise

Variable	Number (%)
Cardiorespiratory exercise	
Moderate intensity (≥150 min/wk; n = 1105)	
Meets requirements	252 (22.8)
Does not meet requirements	853 (77.2)
Moderate intensity (≥5 d/wk; n = 1125)	
Meets requirements	193 (17.2)
Does not meet requirements	932 (82.8)
Vigorous intensity (20–60 min/wk; n = 1110)	
Meets requirements	580 (52.3)
Does not meet requirements	530 (47.7)
Vigorous intensity (≥3 d/wk; n = 1125)	
Meets requirements	348 (30.9)
Does not meet requirements	777 (69.1)
Combined vigorous or moderate intensity (min/wk; n = 1125)	
Meets requirements	681 (60.5)
Does not meet requirements	444 (39.5)
Combined vigorous or moderate intensity (frequency[a]; n = 1125)	
Meets requirements	443 (39.4)
Does not meet requirements	682 (60.6)
Resistance exercise	
Training major muscle groups 2–3 d/wk (n = 1125)	
Meets requirements	643 (57.2)
Does not meet requirements	482 (42.8)

[a] This value represents students who met American College of Sports Medicine guidelines through either ≥5 days per week of moderate-intensity or ≥3 days per week of vigorous-intensity activity.

Table 5. Leisure Constraint Categories and Values[a]

Constraint Item	Mean ± SD	Cronbach α
Intrapersonal items	1.76 ± 0.58	0.72
Exercise makes me feel tired	3.40 ± 1.65	
I am too tired for physical activity	3.10 ± 1.84	
I am afraid of getting hurt due to participating	1.46 ± 0.99	
I have health problems that limit me from participating	1.67 ± 1.38	
I do not feel confident to participate in physical activity	1.50 ± 1.16	
I am not happy working out in social situations	1.75 ± 1.33	
I do not know where I can learn about physical activity	1.12 ± 0.55	
I do not know where I can participate in physical activity	1.13 ± 0.52	
I do not have anyone to teach me about physical activity	1.18 ± 0.62	
I am not skilled enough to participate in physical activity	1.20 ± 0.66	
I am not fit enough to participate in physical activity	1.47 ± 1.04	
I did not enjoy physical activity in the past	1.39 ± 1.01	
I am not interested in participating in physical activity	1.92 ±1.74	
I do not want to interrupt my daily routine with physical activity	2.26 ± 1.60	
Interpersonal items	2.71 ± 1.36	0.69
I do not have anyone to participate with in physical activity	2.43 ± 1.71	
My friends do not like to participate in physical activity	2.20 ± 1.49	
I have friends who do not have time to participate in physical activity	3.50 ± 1.94	
Structural items	2.43 ± 0.84	0.80
The facilities for my physical activity are poorly kept	1.72 ± 1.18	
The facilities for my physical activity are inadequate	1.85 ± 1.41	
The facilities for my physical activity are too crowded	3.43 ± 1.87	
I do not like the facilities offered to participate in physical activity	2.08 ± 1.51	
I do not have the opportunities to participate in physical activity	1.94 ± 1.43	
Transportation for my physical activity takes too much time	1.67 ± 1.22	
I do not have a car to transport me to my physical activity	1.54 ± 1.51	
I cannot afford to participate in physical activity	1.60 ± 1.27	
I do not have time to participate in physical activity due to work/studies	4.20 ± 2.07	
I do not have enough time to participate in physical activity due to family commitments	1.83 ± 1.27	
I do not have enough time to participate in physical activity due to social commitments	2.34 ± 1.55	
My timetable does not allow me to participate in physical activity	3.25 ± 2.01	
I do not enjoy participating in physical activity during hot climate	2.65 ± 1.81	
I do not enjoy participating in physical activity during cold climate	3.00 ± 1.93	
I do not enjoy participating in physical activity during humid climate	3.31 ± 2.04	

[a] Measured on a 7-point Likert scale ranging from 1 = *very unimportant* to 7 = *very important*. Items are presented as in the instrument.

recommended by the ACSM. Based on the number of days ATSs reported participating in activity, 17.2% (193/1105) met the requirements for moderate-intensity and 30.9% (348/1125) met the requirements for vigorous-intensity guidelines. Based on the amount of time they reported for each of these activities, 22.8% (252/1105) met the ACSM guidelines for moderate-intensity and 52.3% (580/1110) met the guidelines for vigorous-intensity cardiorespiratory activity. When combined, 60.5% (681/1125) of students met the ACSM guidelines for cardiorespiratory fitness through moderate-intensity or vigorous-intensity activity based on reported time. However, only 39.4% (443/1125) met the recommendations for moderate-intensity or vigorous-intensity exercise based on frequency. The requirements for resistance training per week were met by 57% (643/1125) of ATSs.

The ATSs thought interpersonal barriers (2.71 ± 1.36) were most likely to prevent them from engaging in PA, followed by structural barriers (2.43 ± 0.84) and intrapersonal barriers (1.76 ± 0.58). The 2 most prevalent barriers to PA were "I do not have time to participate in PA due to work/studies" (4.20 ± 2.07), followed by "I have friends that do not have time to participate in PA" (3.50 ± 1.94).

The PA index calculated from the Leisure-Time Exercise Questionnaire scale was 34.82 ± 24.53. No significant correlations were found between the PA index and grade point average, hours worked, hours spent in class, or hours spent at the clinical assignment. No significant differences were found between PA index and sex, class standing, ethnicity, body composition, body-composition satisfaction, or body composition goal. However, a significant difference in PA index was noted based on PA importance (very important, n = 670; important, n = 356; moderately important, n = 91; of little importance, n = 5; χ^2_3 [n = 1122] = 11.52, $P = .009$). When we performed post hoc testing to determine differences in PA index, the only values to reach statistical significance, using a Bonferroni adjusted α level of .008, were the groups citing PA as *very important* (35.61 ± 24.54) and *of little importance* (9.00 ± 9.01; U = 494.0, z = –2.72, $P = .007$, $r = 0.10$). The ATSs who believed exercise was very important exercised more than those who believed it was of little importance; however, the results showed only a small effect. No other comparisons for level of importance were statistically significant based on the PA index. Finally, the overall regression model did not predict the PA index ($F_{12,1094} = 1.54$, $P > .05$).

DISCUSSION

Our results showed that PA participation among undergraduate athletic training students was similar to that of practicing ATs. Using the PA index calculated from the Leisure-Time Exercise Questionnaire scale, we found that ATSs participated in less PA (34.82 ± 24.53) than practicing ATs (40.56 ± 22.83).[11] However, 52.3% (580/1110) of students were meeting the ACSM guidelines based on vigorous activity and only 22.8% (252/1105) were meeting the requirements based on moderate activity. Groth et al[9] observed that 41% of practicing ATs were meeting the exercise recommendations. A previous study[7] of ATs demonstrated that 84% were physically active outside of work, yet the authors did not report whether the participants were meeting ACSM guidelines for PA. Similar to a previous study,[11] actual PA for ATSs was much lower than their ideal PA. The ACSM recommends[10] that most adults engage in moderate-intensity cardiorespiratory exercise training for ≥30 minutes per day on ≥5 days per week for a total of ≥150 minutes per week or vigorous-intensity exercise cardiorespiratory exercise training for ≥20 minutes per day on ≥3 days per week for a total of ≥75 minutes per week. On average, ATSs in our study fell short on recommendations for both the ≥5 days per week of moderate-intensity exercise and ≥3 days per week of vigorous-intensity exercise measures. However, 60.5% of ATSs met the requirements through a combination of moderate- and vigorous-intensity exercise based on time, whereas only 39.4% met the requirements based on frequency. These results suggest that ATSs tend to be physically active for longer periods of time but not necessarily on a frequent basis. The ACSM also advises performing resistance training that focuses on the major muscle groups 2 to 3 days per week. On average, ATSs in our study were meeting the recommendations for resistance training.

Nationally, PA has declined in all adults because of declining work-related activity, declining transportation activity (eg, walking or biking), declining activity at home, and increasing sedentary activity.[3] The most recent National Institutes of Health study[22] showed that only 25.9% of adults met aerobic exercise recommendations and only 3.6% met resistance-training guidelines. Athletic trainers know the benefits of PA and receive education in strength training, reconditioning, and nutrition. As health professionals, ATs are perceived to be role models for healthy lifestyles and often encourage others to follow their example.[23] Despite this, ATSs and certified ATs do not appear to be performing the recommended amounts of PA. However, both ATSs and ATs exercise at higher rates than the national average[22] and first-year nursing students[5] and at similar levels to physical therapists, physical therapist assistants, and student physical therapists.[24] Authors[25] have hypothesized that education is an important influence on health, and the educational preparation of ATs likely improves their ability to critically appraise health-related information. Our findings were consistent with this and showed that ATSs scored lowest on intrapersonal barriers to PA, such as not knowing where to learn about, participate in, or have someone teach them about PA.

Barriers

Structural constraints, such as lack of time, money, or accessibility, were the most limiting factor to PA participation. Within this construct, ATSs thought they did not have enough time to participate in PA because of work and studies. Budruk et al[11] found this constraint to be the most limiting factor for practicing ATs, yet the sample of practicing ATs scored the item higher (5.41 ± 1.90) than the ATSs in our study (4.20 ± 2.07). Similarly, practicing ATs believed their timetable was a more significant barrier than ATSs did. This suggests that ATSs feel some of the same pressures as practicing ATs regarding their work and studies and demonstrates that their PA habits may start even before they enter the workforce. Previous researchers[7,9] have shown that ATs do not meet the recommended levels of PA, which may be due to work constraints such as long hours, scheduling changes with practices and games, and administrative responsibilities. Establishing a consistent exercise routine can be difficult for ATs due to the many time-management stresses associated with the profession.

Both intrapersonal (attitudes, values, and beliefs) and interpersonal (interactions with others) constraints were similar among ATSs and ATs. The ATSs scored higher (3.50 ± 1.94) on the item "I have friends who do not have time to participate in PA" compared with ATs (2.54 ± 1.75). Both groups indicated they were too tired for PA, with ATs (3.96 ± 1.99) scoring slightly higher than ATSs (3.40 ± 1.65). The purpose of the entry-level athletic training education program is to prepare ATSs to become effective clinicians, which involves acclimating students to the rigors of the profession. During this process, ATSs seem to feel similar constraints to PA participation as their predecessors. Although the topic is beyond the scope of this paper, it would be interesting to learn if the health habits of ATSs are at all attributed to the role modeling of their preceptors and to examine if ATSs and preceptors share similar constraints to PA within the same clinical environment. Finally, our results suggest that students feel secure in their knowledge, ability, and confidence regarding PA participation, yet the time constraints that affect ATs also affect ATSs' engagement in regular exercise programs.

Work-Life Balance

Several barriers to PA were shared by ATSs and ATs. Specifically, both groups thought they lacked enough time to participate in PA because of work and studies. Research[13,15,26] has shown structural constraints, such as inflexible work schedules and time spent at work, are contributing factors to burnout and can increase work-life conflict. Results from a study on burnout in National Collegiate Athletic Association ATs showed that leisure time predicted personal accomplishment and decreased levels of stress.[27] Findings from studies[15,28] published on work-life conflict have emphasized the importance of finding a balance between personal and professional lives, with a direct correlation between "me" time and life balance. One such outlet for many people to help alleviate burnout and decrease work-life conflict is regular engagement in PA. In a preliminary pilot study, aerobic exercise reduced perceived stress and symptoms of burnout and depression.[29] These results further emphasize the need for ATs to regularly engage in PA to reduce the effect of stressors within the profession.

Exercise can not only improve stress symptoms but also improve cognitive function through participation in PA

during childhood, adolescence, and adulthood.[30–32] The ATSs in our study participated in more PA than the general population, and based on a recent systematic review,[32] this could lead to better academic performance. Results from the review suggested that more than 50% of all associations between PA and academic achievement were positive, whereas only 1.5% were negative; the remaining 48% showed no association.[32] Although these studies were conducted primarily in school-aged children, a recent study[31] of college students demonstrated that those students who more frequently engaged in strength-training activities had higher grade point averages. Our findings did not show a link between grade point average and engagement of PA, yet research in this area has shown promising results. Engaging in a single-bout of exercise or following a long-term plan have both improved such cognitive tasks as planning, scheduling, and working memory.[33,34] Experts tend to focus on the importance of PA for maintaining health and preventing disease, but this line of research indicates other important benefits to any college student.

Limitations

Our survey methods involved contacting program directors and asking them to forward the survey link to students enrolled in their athletic training education programs. Program directors were not asked to report the number of students receiving the e-mail; therefore, the total sample population is unknown. Furthermore, self-reported PA is not necessarily the most accurate way to measure true habits. However, this method did allow us to examine a much larger sample. Additionally, data were not collected by state or National Athletic Trainers' Association district of the participants. Thus, geographic location might have affected our findings. Finally, we were unable to obtain the data from the 2009 study[11] on certified ATs that would have allowed us to determine if statistically significant differences existed. Future researchers should look more closely at the effect of PA participation on scholastic performance in athletic training education programs and Board of Certification examination pass rates.

CONCLUSIONS

We report the exercise habits and constraints to PA of entry-level ATSs. Previous authors have shown that ATs fall short of the recommended PA, and our finding was similar among ATSs. However, a higher percentage of ATSs met the ACSM guidelines compared with the general population. These results suggest the need to emphasize work-life balance to promote both greater opportunities for PA participation and potential academic benefits.

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Address correspondence to Justin Stanek, EdD, ATC, School of Kinesiology and Recreation, Illinois State University, Campus Box 5120, Normal, IL 61790. Address e-mail to jmstane@ilstu.edu.