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**Determining the prevalence of injuries, musculoskeletal symptoms, and stressors in athletic training students**

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A thesis defense submitted to the Honors College at the University of Arkansas in partial fulfillment of the requirements for the degree Bachelor of Science in Kinesiology with Honors

Wednesday February 13, 2019



## **ABSTRACT**

Athletic training is one of the youngest and most rapidly growing professions in the medical field. One of the most prevalent problems with this young profession is the lack of information in the literature about injury, illness, and symptom reporting throughout the course of their career. The purpose of this study was to determine the self-reported prevalence of clinical-related injury, and musculoskeletal disorders/dysfunctions in current athletic training students. I hypothesized that the low back, neck, hand, and knee would be the most frequently affected body areas. Athletic training students from the University of Arkansas were recruited to take this survey. Descriptive statistical analyses of these responses were used to understand symptom, illness, and job stressors. The most commonly reported symptom was lower back pain (77%), followed by neck and shoulder pain (56%). Four of 14 (28.6%) people who reported lower back symptoms said that it also affected their work. Inadequate sleep, long work weeks, and long work days were the three top contributors to mental stressors. We also found in investigating environmental stressors that by grouping job uncertainty, inadequate staffing, and workload greater than usual all could stem from a similar issue of workplace culture. This information can be used to create educational competencies for students to decrease injury and reduce musculoskeletal disorders in the workplace.

## Introduction

Athletic training is a fast-growing profession –from 2014-2024 there will be a 21% increase in employment, compared to a 7% average for all occupations (Bureau of Labor Statistics, 2017). Of public high schools that responded to a survey regarding athletic trainer presence, 70% had an athletic trainer (AT) present at least some of the time and 27% of those schools hired the AT through a clinic (Pryor et al., 2015). The problem is, little is known about the work-related injury risk in the athletic training profession. Despite the literature containing information about injury risk and musculoskeletal dysfunction on other occupations including physical therapists, research is limited on the rate and types of injuries ATs sustain (Kucera et al., 2016). Athletic Trainers are most likely to sustain low back, hand/fingers, and knee injuries while at work (Kucera et al. 2016). Kucera (2015) found that a high percentage of respondents reported pain symptoms for the neck, shoulder, and back; however, they rarely take time off of work for these symptoms (Kucera, 2015). The current National Athletic Trainers' Association (NATA) strategic plan includes identifying, prioritizing, and participating in activities that impact ATs (NATA Strategic Plan, 2015). Advocating for ATs should include researching potential risk factors that contribute to injury in this profession and educating current and future athletic trainers on those risk factors.

All accredited professional athletic training programs are required to provide hands-on clinical experiences for all students that cover a wide variety of patients and settings. Athletic training students commonly interact with patients in athletic training settings daily, just as ATs do. While research has begun to investigate the injury and symptom reports of ATs, **there is currently no research on the injuries, symptoms, risk factors, and management strategies of current athletic training students.** It is necessary to understand the occupational exposures

to the athletic training students during their clinical experiences and understand the way they go about managing these exposures.

Other health-related professions have researched musculoskeletal symptoms, injuries, and illnesses in their students. A study conducted on dentistry students found that more than half of the students (58.6%) believed that adopting an ergonomic posture is important to prevent future problems, pain, and occupational diseases. Interestingly, even more (62.1%) of those students confirmed having difficulties in adopting ergonomic postures (Garcia et al., 2016). A previously validated self-reporting questionnaire was distributed to dental hygiene students in 3 consecutive years from 2008 to 2010. Musculoskeletal disorders were most commonly reported in the neck (ranging from 66 to 68%) and lower back (ranging from 61 to 68%), with a marked increase in reported lower back pain by the final year of study (Hayes et al., 2014). In female undergraduate nursing students, stress, coping, physical activity, spinal kinematics, and age all had an independent contribution to the presence of low back pain, representing a significant 23% of the variance (Mitchell et al., 2009). A 2003 study revealed a significant association between hours of use of ultrasonics and upper extremity numbness/tingling, with an odds ratio of 1.10 for each increased hour of use (95% CI 1.01-1.19; chi-square = 4.9) (Morse TF et al., 2003). A similar result was found for manual instrument use (Morse et al. 2003). Results of these can be applied to investigation with athletic training students. Since the demand for using occupation specific equipment in dentistry showed signs of concern with dental hygiene students, it is reasonable to investigate the consequences of using occupation specific equipment in athletic training students. This understanding will assist with targets for change in educational competencies so that students can learn about potential risk factors and create a safer work environment for the future of the profession.

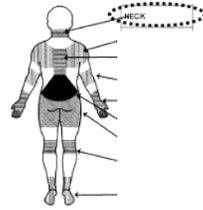
The purpose of this study was to describe the clinical-related injuries and musculoskeletal symptoms, explore the risk factors for clinical-related injury, and uncover individual injury management strategies of current athletic training students. We used a validated questionnaire to determine the self-reported prevalence of clinical-related injury in current athletic training students. We hypothesized that low back, hands, fingers, and knee would be the most frequently affected body parts. The information will provide insight into the injury prevalence of athletic training students and how the NATA could incorporate proper injury prevention techniques in educational competencies for athletic training programs (NATA competencies 5<sup>th</sup> Edition, 2011). By implementing the proper workplace injury prevention education in athletic training programs, both athletic training students and athletic trainers could create a safer workplace with reduced risk factors for injury and musculoskeletal dysfunction.

## **Experimental Design and Methods**

This study was completed through an online survey through Qualtrics in September 2018. The survey was distributed to 39 graduate athletic training students at the University of Arkansas. The first year AT students were asked about their experiences as undergraduate athletic training student aides in the last 12-months. The second-year students were asked about their clinical experiences over the previous 12 months. The survey used in this study was a modified version of a survey previously used to gather the same information for ATs (Kucera, 2015). The survey (Appendix A) included questions from the following categories:

- Clinical setting and previous clinical experience
- Clinical injury
- Clinical-related musculoskeletal symptoms
- Potential work stressors (mental, environmental, biomechanical)

Symptom reporting was based on the Nordic Pain Questionnaire (Kuorinka et al., 1987). Participants were asked to report symptoms that prevented their reporting to the clinical sites and required a missed day of clinical in the last year or prevented them from completing some of their required clinical tasks. If a participant reported a symptom to a specific region, they were asked about the length of time it affected their activity, if it modified their work habits, if they missed a day of work, and if they sought medical care (Figure 1).



In the last 12 months have you had symptoms including ache, pain, or discomfort in the **neck**?

- Yes
- No [Skip to next page, Question 49]

**If yes:** Please answer the following questions.

\*Photo from Nordic Musculoskeletal Questionnaire



a) Have you at any time in the last 12 months had **neck** symptoms including ache, pain, or discomfort that **prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **neck** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **neck** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **neck** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **neck** symptoms required you to **miss a day of work**?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **neck** symptoms?

- Yes
- No

**Figure 1. An example of a question related to symptom reporting for the neck. Similar questions will be asked for the rest of the body. Image credit: Dr. Kaitlin Gallagher**

A panel of current AT students and educators validated the survey. The potential participants received an email with a link to the online survey and completed a consent form on the first page. There was a second email then sent out either thanking the participant or with a reminder attached to complete the survey with the link to the survey once again posted. Two weeks after the second email was sent, a final email was sent similar to the second email to those who had still not completed the survey with a final link to the survey. To investigate my research question, I calculated descriptive statistics, such as frequencies and percentages of musculoskeletal symptoms that were reported in the Nordic Pain Questionnaire. I also

investigated injury and illness reports and how those affected ability to work along with mental and physical environmental stressors experienced in clinical sites.

## Results

Eighteen athletic training students of an eligible 39 completed the survey (46%). Six were second-year students, and 12 were first-year students who had been athletic training student aides at their previous institutions. Seven males and 11 females participated. Since there was not a large enough sample to compare groups by sex or level of training, all results will be reported for the eighteen students combined.

The most commonly reported symptom was lower back pain (77%), followed by neck and shoulder pain (56%) (Table 1). These areas also had the highest reported number of respondents for having been affected by the symptom as well as if their activity should have been altered. Four of 14 (28.6%) of people who reported lower back symptoms said they had their work affected by the symptom. Fifty percent of people who reported upper back symptoms said they should have altered their activity even though they did not after experiencing that symptom. Interestingly, 0% of people said they were affected by their Feet/Ankle symptoms, even though 33% of those people said they should have altered activity due to that symptom.

**Table 1. Reported Symptoms**

<b>Body Part</b>	<b>Reported Symptom</b>	<b>Work Affected by Symptom</b>	<b>Should have altered work based on symptom</b>
<b>Neck</b>	55.6% (10 of 18)	10.0% (1 of 10)	33.3% (3 of 9)
<b>Shoulder</b>	55.6% (10 of 18)	20.0% (2 of 10)	25.0% (2 of 8)
<b>Upper Back</b>	44.4% (8 of 18)	25.0% (2 of 8)	50.0% (3 of 6)
<b>Elbows</b>	0.0% (0 of 17)	0.0% (0 of 0)	N/A
<b>Wrist/Hands</b>	16.7% (3 of 18)	33.3% (1 of 3)	0.0% (0 of 2)
<b>Lower Back</b>	77.8% (14 of 18)	28.6% (4 of 14)	20.0% (2 of 10)
<b>Hips/Thighs</b>	41.2% (7 of 17)	28.6% (2 of 7)	20.0% (1 of 5)
<b>Knees</b>	38.9% (7 of 18)	28.6% (2 of 7)	40.0% (2 of 5)

<b>Feet/Ankles</b>	29.4% (5 of 17)	0.0% (0 of 5)	33.3% (2 of 6)
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Four respondents reported an illness or injury that occurred at their clinical site within the past year (Table 2). Infectious Exposure was the only cause of illness or injury that required time away from work or the person to quit a clinical site. Chemical Exposure required medical care beyond first aid but did not require any form of modification to activities or concern from supervisor to urge time off for the student. One overexertion required medical care beyond first aid, self-care of the injury, and caused modification of work activities; however, the student did not take any time off, was not urged by a supervisor to take time off, and they remained at the clinical site where the condition was reported.

**Table 2. Injury and Illness Reports.**

<b>Cause</b>	<b>Medical Care (beyond first aid)</b>	<b>Self-Care of the Injury</b>	<b>Modify Work Activities</b>	<b>Required time away</b>	<b>Supervisor asked you to take time off</b>	<b>Did this lead to quitting?</b>
<b>Infectious Exposure</b>	No	No	No	Yes	Yes	Yes
<b>Chemical Exposure</b>	Yes	No	No	No	No	No
<b>Overexertion</b>	Yes	Yes	Yes	No	No	No
<b>Overexertion</b>	No	No	No	No	No	No

Inadequate sleep, Long work weeks, and Long work days were the three top contributors to mental stressors (Table 3). Grouping together job uncertainty, inadequate staffing, and workload greater than usual all could stem from a similar problem and present relatively equal stress levels. Work scheduling and inadequate sleep (Table 3) were the major contributors to physical environmental stressors. Working in the same position for an extended time, continuing to work while injured or hurt, and carrying or lifting heavy equipment were the major contributors to biomechanical stress reported (Table 4).

**Table 3. Mental and Physical Environmental Stressors.**

<b>Stressor:</b>	<b>Mean for Stressor Contribution:</b>
<b>MENTAL STRESSORS</b>	
Inadequate Sleep	6.5
Long Work Weeks (>5 Days)	6.4
Long Work Days (>10 Hours)	6.3
Irregular Work Schedule	6.0
Workload Greater Than Usual	5.1
Inadequate Staffing	5.1
Job Uncertainty	5.0
Interaction with Families, Coaches...	3.1
Patient/Athlete Interaction	1.9
<b>ENVIRONMENTAL STRESSORS</b>	
Work Scheduling (Overtime, Overnight, Irregular Shift Schedules...)	6.1
Inadequate Sleep	5.8
Working in inclement conditions	4.7
Lack of staff or short-staffed	4.5
Inadequate training on injury prevention	4.1
Treating an excessive number of patients in a single day	3.4
Transportation-related tasks (motor vehicle or motorized cart)	2.4

**Table 4. Biomechanical Stress Measures.**

<b>Stressor:</b>	<b>Mean for Stressor Contribution:</b>
Working in the same position for extended periods of time	6.8
Continuing to work while injured or hurt	6.5
Carrying, lifting heavy equipment	6.3
Working in awkward or cramped positions	5.9
Working near or at physical limits	5.8
Bending or twisting your back awkwardly	5.4
Not enough rest or breaks during work day	4.9
Reaching or working away from your body	4.9
Performing the same task over and over	4.5
Applying protective/preventative devices such as tape or braces	3.6
Lifting or transferring dependent patients	3.1
Performing manual orthopedic techniques	3.1
Assisting with rehabilitation activity	2.6
Administering emergency care	1.6

## Discussion

The purpose of the study was to identify the risk factors and stressors that impact student athletic trainers both at the undergraduate and masters' level. Previous studies have investigated the stressors imposed on certified athletic trainers, but by identifying stressors at an earlier stage in this career's trajectory, we can assist athletic trainers by providing strategies for coping with these stressors in their future careers

Lower back, hands/wrists, knees, and hips/thighs were the most frequently affected body parts reported by students (Table 1). In this study, the lower back (14 of 18, 77.87%) was the highest reported body part to show symptoms, which aligns with previous work on certified athletic trainers. 64% of certified athletic trainers reported lower back musculoskeletal symptoms (Kucera et al., 2015). There was another study on certified athletic trainers (Kucera et al., 2016) that identified the lower back (17.2%), hands/wrists (12.3%), and knees (9.6%) as the body parts with the highest injury rates. A study on certified athletic trainers in Taiwan found that 42% of respondents reported low back symptoms (Yan-Ying Ju et al., 2011).

The only injury/illness that led to time off work via supervisors' orders or otherwise was "Illness due to Infectious Exposure." (Table 2). The two overexertion injuries led to self-care beyond first aid and modification of work despite no reports of it leading to time off. In certified athletic trainers, twenty-five percent of injuries required modification of work and 25% of ATs missed work due to injury or illness (Kucera et al., 2018).

Students identified that working in the same position for extended periods (6.8 out of 10), continuing to work while injured or hurt (6.5 out of 10), and carrying/lifting heavy equipment (6.3 out of 10) created the most biomechanical stress on their bodies. A study looking at certified

athletic trainers (Kucera et al., 2015) found that worker motion, handling patients, and moving equipment were identified as tasks resulting in the most biomechanical stress. Certified athletic trainers previously surveyed got hurt performing the same task repetitively (27.3%) (rated by students at 4.5/10) followed by the feeling of working with a tired body (rated for students at 4.9/10) (Yan-Ying Ju et al., 2011).

Students reported “bending or twisting their back awkwardly” a 5.4 out of 10 for biomechanical stress. This statistic paired with our 77.87% of students who reported lower back symptoms and 44.4% of students who reported upper back symptoms, the back is an area of concern moving forward with future research. A previous study (Marras et al., 1998) found that the change in muscle activity needed to balance the torso during twisting while bending also increases the amount of lateral torque produced by the trunk. Many of the required movements in an occupational setting such as athletic training occur in bent and awkward positions, so studies that conduct measurements in upright postures only or in a laboratory under best case settings risk underestimating the effects different movements have on the trunk which could, in turn, underestimate the increased risk for injury that accompanies these tasks.

Students reported that the two highest environmental stressors were work scheduling and inadequate sleep at 6.1 out of 10 and 5.8 out of 10 respectively. Certified athletic trainers reported inadequate sleep as a 4 out of 10 for mental stressors (Kucera et al., 2015). With students having schedules that go beyond just that of their clinical rotations, this is an area of concern to be addressed in future research. Students do not just deal with the mental stressors of their clinical work environments as they also have class schedules and other priorities that take time in their lives. Inadequate sleep is associated with multiple acute and chronic diseases and results in increased mortality and morbidity for cardiovascular disease (Liu H. et al., 2019). As a

result, athletic training faculty and preceptors should be aware of this and work towards educating students about the importance of sleep on their performance. Becerra et al. (2018) found that the majority of college students in their respective sample reported feelings of tiredness, fatigue, or daytime sleepiness while also reporting that they slept less than 8 hours per night. These findings were heavily linked with food insecurities, serious psychological distress, and poorer self-rated mental and physical health in this population (Becerra et al. 2018). Inadequate sleep acknowledged in our study by athletic training students is worrisome due to the known mental, physical, and overall health consequences found in other studies on the same population.

This study had a small sample size. By only addressing students at the University of Arkansas, it is difficult to extrapolate this set of data to a much broader group of interest. The study was conducted as a survey. This presents many limitations because participation is not always going to be guaranteed. Even though the target group was all the athletic training students, both undergraduates and graduates, at the University of Arkansas, not all of them were guaranteed to participate. As a pilot study, the length of the survey might have been overwhelming, questions might have been confusing, or the flow of the survey may have made it difficult for people to respond. When first creating this survey, there may have been things that we thought would be bigger issues than reported. This could have led to a lengthy survey that turned students away. There is also the possibility for those who did respond to have bias due to events in their personal life which could lead to polarized results.

## **Conclusion**

In conclusion, the lower back is the major area of interest in terms of reported symptoms in ATS?, which is similar to previous results found for certified athletic trainers. Despite reported injury and illness, ATs, both certified (other studies) and students very rarely take time off from work to recover. They also modify work only sometimes to accommodate for that reported symptom. Working in the same position for extended periods of time created the most biological stress according to reports while continuing to work while injured and carrying heavy equipment were second and third, respectively, for creating biomechanical stress. Inadequate sleep and irregular scheduling, despite not being the highest rated mental or physical stressor, were very prominent in its high appearance on both tables' ratings. This information paired with emerging evidence on the effects of sleep leads us to desire more research in this area of concern.

We want to be able to use this study as a guide for launching a study targeting student athletic trainers nationwide, addressing all regions with various lifestyles and issues. The future of this research is to go in a direction that sees the information gathered on students compared with information gathered on certified athletic trainers. As students are in a different position than their certified counterparts, the things that create stress and provide risk to them may be different than to when they become certified athletic trainers themselves. Because there is the possibility for various issues within the spectrum of the profession, we want to be able to address ATs as a whole and provide them with optimal care throughout the entire timeline from student to professional to retirement. By increasing safety, improving burnout rates, and reducing stress on ATs, this research will be able to be utilized to provide more ATs willing and able to provide optimal healthcare they can.

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## APPENDIX A - SURVEY

### **Work-Related Risks of Athletic Training Students**

Thank you for your interest in this study on work injuries in athletic training students and student aids. Athletic training students who have been enrolled in a Bachelor's or Master's level Athletic Training Education Program, or a undergraduate work-study athletic training program within the past 12 months are eligible to participate. Please indicate which of the following apply to you by checking the appropriate boxes.

#### **During the past 12 months:**

- I have been enrolled in a bachelor's athletic training program**
- I have been enrolled in a master's athletic training program**
- I have been part of an undergraduate work-study athletic training education program**

For questions or assistance contact the Principal Investigator Kaitlin Gallagher at 479-575-5173 or send an email message to [kmg014@uark.edu](mailto:kmg014@uark.edu).

## Part I. Training program and Setting Demographics

*Please answer the following questions.*

1. How long have you been enrolled in your current Athletic Training Program? OR how long have you been a student athletic trainer

*Write in semesters* \_\_\_\_\_

2. If you are enrolled in a Master's program, were you in a work-study athletic training program during your undergraduate degree?

Yes                      No

*If yes how many semesters of experience do you have?*

*Write in semesters*\_\_\_\_\_

3. What have been the settings for your clinical responsibilities while enrolled in your most recent athletic training program?

*Select all that apply:*

- Collegiate
- Secondary School
- Clinical
- Other

a. If other setting, please select the other settings that apply below:

- Hospital
- Health or Fitness Clubs
- Professional Sports (e.g., baseball, hockey)
- Performance Arts (e.g., ballet, Cirque de Soleil)
- Industrial or Occupational
- Amateur, Rec or Youth Sport
- Military, Government or Law Enforcement
- Corporate
- Residential care facility or nursing home
- Independent Contractor
- Other, please specify: \_\_\_\_\_

b. If you selected Collegiate setting, please specify the college/university level

*Select all that apply:*

- NCAA Division 1
- NCAA Division 2
- NCAA Division 3
- NAIA
- Community or junior college
- Other college

c. If you selected secondary school, please specify level:

- High school
- Middle school
- Other school, please specify\_\_\_\_\_

4. If you were a student athletic trainer or student aide in your undergraduate degree before your entry into your Master's program, what were the settings that you worked in?

*Select all that apply:*

- Collegiate
- Secondary School
- Clinical
- Other

a. If other setting, please select the other settings that apply below:

- Hospital
- Health or Fitness Clubs
- Professional Sports (e.g., baseball, hockey)
- Performance Arts (e.g., ballet, Cirque de Soleil)
- Industrial or Occupational
- Amateur, Rec or Youth Sport
- Military, Government or Law Enforcement
- Corporate
- Residential care facility or nursing home
- Independent Contractor
- Other, please specify: \_\_\_\_\_

b. If you selected Collegiate setting, please specify the college/university level

*Select all that apply:*

- NCAA Division 1
- NCAA Division 2
- NCAA Division 3
- NAIA
- Community or junior college
- Other college

c. If you selected secondary school, please specify level:

- High school
- Middle school
- Other school, please specify\_\_\_\_\_

## Part II. Present Clinical and Setting Information

5. Are you the only athletic training student or student aide at your primary clinical site?

- Yes
- No

6. Please select the statement below that best describes how often others are available to lessen or share the AT workload. In other words, are others available to help you or do you complete all the work by yourself.

- I **always** have others to help me with my AT work tasks
- I most of the time have others help me with my AT work tasks
- About **half the time** I have others to help me with my AT work tasks
- I **rarely** have others to help me with my AT work tasks
- I **never** have others to help me with my AT work tasks

*These next questions ask about the hours you work as an athletic training student or student aide.*

7. **In the past 12 months**, how many hours did you perform clinical tasks on average per week during your clinical experience or work study internships?

*We know this will vary, please select the best one:*

- Less than 20 hours
- 20 to 29 hours
- 30 to 39 hours
- 40 hours
- 41 to 49 hours
- 50 to 59 hours
- 60 or more hours

8. Did the average hours per week that you reported in the previous question vary by 10 hours or more per week during different seasons or months of the year? (For example more or less during the Fall or during the month of August)?

- Yes
- No [*Skip to Question 20*]

**If yes:** a) Select ALL the months your average hours INCREASED by 10 hours or more per week:

*Select all that apply:*

January  
February  
March  
April  
June  
July  
August  
September  
October  
November  
December

b) What sport were you involved with during this time of increased work? \_\_\_\_\_

c) Select ALL the months your average hours DECREASED by 10 hours or more per week:

Select all that apply:

- January
- February
- March
- April
- June
- July
- August
- September
- October
- November
- December

c) What sport were you involved with during this time of decreased work? \_\_\_\_\_

*The next questions ask you about clinical-related travel related to your current athletic training clinical experience or work-study internship.*

9. Do you travel in town as part of your athletic training clinical experience or internship (e.g., drive from the clinic to offsite practice facility, drive to games)?

- Yes
- No [*Skip to Next Question*]

**If yes:** a) How often do you travel?

Select one:

- Daily
- A few times a week
- A few times a month
- A few times a year

10. Do you travel out of town as part of your athletic training clinical experience or internship (e.g., drive from campus to clinical site, with teams to away games, or with performers to out of town performances)?

- Yes
- No [*Skip to Next Question*]

**If yes:** a) For what sports seasons did you travel out of town?

Select all that apply:

- Spring semester – January to mid-May
- Summer semester – mid-May to mid-August
- Fall semester – mid-August to December

### Part III. Work-related Injury or Illness

*These next questions ask you about work-related injury or illness events you had at your clinical or work-study site. By "**accident or injury event at work**", we mean an accident, injury, or illness event that happened related to your clinical athletic training responsibilities. This includes all athletic training-related activities such as preparing or carrying your equipment and supplies and driving your car to work locations (practice fields or game locations).*

11. **During the previous 12 months**, have you had any accident or injury events at your clinical or work-study site?

- Yes
- No

**If yes please answer the following questions:**

12. How many accidents or injury events did you have in the past 12 months?

*Enter number*\_\_\_\_\_

13. Did any of these accidents or injury events require at any time:

a) Medical care beyond minor first aid?

- Yes
- No

b) Limitations at clinical experience or internship (unable to or difficulty perform normal or expected work tasks)?

- Yes
- No

c) Time away from clinical experience or internship (miss 1 day or more of work)?

- Yes
- No

***If yes for any question in 13, how many days missed (Enter Number)*** \_\_\_\_\_

Please pick the work-related **accident or injury event** that you consider the most serious during the 12 month period, and answer the following questions.

14. Please write a short description of the injury event that includes what you were doing, who you were working with, and anything else related to the injury. Think of this as the subjective section of the "SOAP" note.

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15. Choose the primary event or mechanism involved in the injury event.

Select one:

- Assault or assault-related
- Bodily reaction or sudden movement
- Caught in, by, or under object
- Chemical exposure or contact
- Contact with body fluid
- Contact with heat or cold
- Contact with sharp object including needles
- Electrical
- Environmental (heat, cold)
- Fall from height (>4 feet)
- Fall from the same level
- Infectious exposure
- Insect bite or sting
- Overexertion from lifting, pushing, pulling, carrying, etc.
- Repetitive motion or cumulative trauma
- Slip or trip
- Struck by a person (not assault-related)
- Struck by or against an object
- Transportation or vehicle crash (includes golf carts and motor vehicles)
- Other, please specify: \_\_\_\_\_

16. How many body parts were injured in this event/accident?

Enter number \_\_\_\_\_

*What specific parts of your body and in what way were they injured in this event or accident?*

	a. Body Part 1 (select one)	b. Type of Injury or illness 1
17. Injury 1	<ul style="list-style-type: none"> <li><input type="radio"/> Mouth or jaw</li> <li><input type="radio"/> Dental</li> <li><input type="radio"/> Eye</li> <li><input type="radio"/> Ear</li> <li><input type="radio"/> Face</li> <li><input type="radio"/> Head</li> <li><input type="radio"/> Neck</li> <li><input type="radio"/> Shoulder</li> <li><input type="radio"/> Upper arm</li> <li><input type="radio"/> Elbow</li> <li><input type="radio"/> Forearm</li> <li><input type="radio"/> Wrist</li> <li><input type="radio"/> Hand</li> <li><input type="radio"/> Fingers</li> <li><input type="radio"/> Thumbs</li> <li><input type="radio"/> Upper back</li> <li><input type="radio"/> Chest</li> <li><input type="radio"/> Abdomen</li> <li><input type="radio"/> Low back</li> <li><input type="radio"/> Pelvis</li> <li><input type="radio"/> Hip</li> <li><input type="radio"/> Thigh</li> <li><input type="radio"/> Knee</li> <li><input type="radio"/> Lower leg</li> <li><input type="radio"/> Ankle</li> <li><input type="radio"/> Foot</li> <li><input type="radio"/> Toes</li> <li><input type="radio"/> Trunk multiple</li> <li><input type="radio"/> Multiple parts</li> <li><input type="radio"/> Other, please specify: _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Abrasion</li> <li><input type="radio"/> Amputation</li> <li><input type="radio"/> Avulsion</li> <li><input type="radio"/> Concussion</li> <li><input type="radio"/> Contusion</li> <li><input type="radio"/> Cut, laceration, puncture</li> <li><input type="radio"/> Dislocation</li> <li><input type="radio"/> Fracture</li> <li><input type="radio"/> Sprain</li> <li><input type="radio"/> Strain</li> <li><input type="radio"/> Hernia</li> <li><input type="radio"/> Inflammatory (tendinitis, bursitis)</li> <li><input type="radio"/> Nerve condition</li> <li><input type="radio"/> Bite or sting</li> <li><input type="radio"/> Body fluid exposure</li> <li><input type="radio"/> Burn</li> <li><input type="radio"/> Dermatitis or allergic reaction</li> <li><input type="radio"/> Electric shock</li> <li><input type="radio"/> Hearing loss or damage</li> <li><input type="radio"/> Heat illness or stroke</li> <li><input type="radio"/> Poisoning</li> <li><input type="radio"/> Ill-defined symptoms</li> <li><input type="radio"/> Illness (GI,flu, etc.)</li> <li><input type="radio"/> Other, please specify: _____</li> </ul>

	a. Body Part 2 (select one)	b. Type of Injury or illness 2
18. Injury 2	<ul style="list-style-type: none"> <li><input type="radio"/> Mouth or jaw</li> <li><input type="radio"/> Dental</li> <li><input type="radio"/> Eye</li> <li><input type="radio"/> Ear</li> <li><input type="radio"/> Face</li> <li><input type="radio"/> Head</li> <li><input type="radio"/> Neck</li> <li><input type="radio"/> Shoulder</li> <li><input type="radio"/> Upper arm</li> <li><input type="radio"/> Elbow</li> <li><input type="radio"/> Forearm</li> <li><input type="radio"/> Wrist</li> <li><input type="radio"/> Hand</li> <li><input type="radio"/> Fingers</li> <li><input type="radio"/> Thumbs</li> <li><input type="radio"/> Upper back</li> <li><input type="radio"/> Chest</li> <li><input type="radio"/> Abdomen</li> <li><input type="radio"/> Low back</li> <li><input type="radio"/> Pelvis</li> <li><input type="radio"/> Hip</li> <li><input type="radio"/> Thigh</li> <li><input type="radio"/> Knee</li> <li><input type="radio"/> Lower leg</li> <li><input type="radio"/> Ankle</li> <li><input type="radio"/> Foot</li> <li><input type="radio"/> Toes</li> <li><input type="radio"/> Trunk multiple</li> <li><input type="radio"/> Multiple parts</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Abrasion</li> <li><input type="radio"/> Amputation</li> <li><input type="radio"/> Avulsion</li> <li><input type="radio"/> Concussion</li> <li><input type="radio"/> Contusion</li> <li><input type="radio"/> Cut, laceration, puncture</li> <li><input type="radio"/> Dislocation</li> <li><input type="radio"/> Fracture</li> <li><input type="radio"/> Sprain</li> <li><input type="radio"/> Strain</li> <li><input type="radio"/> Hernia</li> <li><input type="radio"/> Inflammatory (tendinitis, bursitis)</li> <li><input type="radio"/> Nerve condition</li> <li><input type="radio"/> Bite or sting</li> <li><input type="radio"/> Body fluid exposure</li> <li><input type="radio"/> Burn</li> <li><input type="radio"/> Dermatitis or allergic reaction</li> <li><input type="radio"/> Electric shock</li> <li><input type="radio"/> Hearing loss or damage</li> <li><input type="radio"/> Heat illness or stroke</li> <li><input type="radio"/> Poisoning</li> <li><input type="radio"/> Ill-defined symptoms</li> <li><input type="radio"/> Illness (GI,flu, etc.)</li> <li><input type="radio"/> Other, please specify: _____</li> </ul>

	<input type="radio"/> Other, please specify: _____	
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	a. Body Part 3 (select one)	b. Type of Injury or illness 3
19. Injury 3	<input type="radio"/> Mouth or jaw <input type="radio"/> Dental <input type="radio"/> Eye <input type="radio"/> Ear <input type="radio"/> Face <input type="radio"/> Head <input type="radio"/> Neck <input type="radio"/> Shoulder <input type="radio"/> Upper arm <input type="radio"/> Elbow <input type="radio"/> Forearm <input type="radio"/> Wrist <input type="radio"/> Hand <input type="radio"/> Fingers <input type="radio"/> Thumbs <input type="radio"/> Upper back <input type="radio"/> Chest <input type="radio"/> Abdomen <input type="radio"/> Low back <input type="radio"/> Pelvis <input type="radio"/> Hip <input type="radio"/> Thigh <input type="radio"/> Knee <input type="radio"/> Lower leg <input type="radio"/> Ankle <input type="radio"/> Foot <input type="radio"/> Toes <input type="radio"/> Trunk multiple <input type="radio"/> Multiple parts <input type="radio"/> Other, please specify: _____	<input type="radio"/> Abrasion <input type="radio"/> Amputation <input type="radio"/> Avulsion <input type="radio"/> Concussion <input type="radio"/> Contusion <input type="radio"/> Cut, laceration, puncture <input type="radio"/> Dislocation <input type="radio"/> Fracture <input type="radio"/> Sprain <input type="radio"/> Strain <input type="radio"/> Hernia <input type="radio"/> Inflammatory (tendinitis, bursitis) <input type="radio"/> Nerve condition <input type="radio"/> Bite or sting <input type="radio"/> Body fluid exposure <input type="radio"/> Burn <input type="radio"/> Dermatitis or allergic reaction <input type="radio"/> Electric shock <input type="radio"/> Hearing loss or damage <input type="radio"/> Heat illness or stroke <input type="radio"/> Poisoning <input type="radio"/> Ill-defined symptoms <input type="radio"/> Illness (GI, flu, etc.) <input type="radio"/> Other, please specify: _____

20. What was the date of the injury event?

*Enter month (MM):* \_\_\_\_\_

*Enter year (YYYY):* \_\_\_\_\_

21. What time of day was the injury event?

*Enter hour:* \_\_\_\_\_       a.m.    p.m.

22. At the time of the event, where were you?

- Clinic or treatment center
- Other location related to your AT site
- Indoors for practice, game, or event location (courts, weight room, etc.)
- Outdoors at a practice, game, or event location (fields, etc.)
- On a road or highway
- At home, doing athletic training work
- Other, please specify: \_\_\_\_\_

23. Did this injury event you described above **require medical care beyond minor first aid?**

- o Yes
- o No

**If yes:** a) Did you care for the injury yourself?

- o Yes
- o No

b) **If no, then** Did you seek medical **care** from:

*Select all that apply:*

- None
- Employer occupational healthcare provider
- Private health care provider (MD, DC, RN, PT, ATC, etc.)
- Co-workers (MD, DC, RN, PT, ATC, etc.)
- Peers (athletic training students, student aides, etc.)
- Other, please specify: \_\_\_\_\_

c) Did you seek medical **advice** from:

*Select all that apply:*

- None
- Employer occupational healthcare provider
- Private health care provider (MD, DC, RN, PT, ATC, etc.)
- Co-workers (MD, DC, RN, PT, ATC, etc.)
- Peers (athletic training students, student aides, etc.)
- Other, please specify: \_\_\_\_\_

24. Did this injury event you described above **require limitations at work** (unable to perform normal or expected work tasks)?

- o Yes
- o No

**If yes:** a) For how long were you limited at work?

*Select one:*

- o Part of a day
- o 1-3 days
- o 4-7 days
- o 8-14 days
- o 15-30 days
- o More than 30 days

b) Did you modify or change your work activities?

- o Yes
- o No [*Skip to question 40*]

**If yes:** How did you modify or change your work activities?

*Select all that apply:*

- Modified your athletic training or work techniques
- Changed your duties
- Changed work settings
- Decreased patient contact hours
- Changed type of patient you usually treat
- Reduced the hours that you spent working
- Other

c) Please specify any restrictions or work activities that you could not do.

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25. Did this injury event you described above **require time away from work** (miss 1 day or more of work)?

- Yes
- No

**If yes:** a) How many days did you miss?

*Select one:*

- 1-3 days
- 4-7 days
- 8-14 days
- 15-30 days
- More than 30 days

b) Did you take time off on sick leave?

- Yes
- No

c) Did you take time off on workers' compensation?

- Yes
- No

d) Did you take time off on vacation?

- Yes
- No

e) Did your supervisor tell you to take time off?

- Yes
- No

26. For the work-related injury event reported above, were you prevented by a certified professional from performing any non-work related or leisure activities?

- Yes
- No

27. For the work-related injury event reported above, were you limited from performing non-work related or leisure activities?

- Yes
- No

28. For the work-related injury event reported above, did you file a claim with workers' compensation?

- Yes [*Skip to question 44*]
- No

**If no:** a) Why didn't you file a claim?

*Select all that apply:*

Injury did not meet requirements for filing a claim

I was able to manage it myself

I was worried about the effect filing a claim would have on my program enrollment or work study

Confidentiality reasons (did not want others to know about it)

Other, please specify: \_\_\_\_\_

29. For the work-related injury event reported above, did you leave or quit your clinical experience or work-study internship?

- Yes
- No

## Part IV. Blood and Body Fluid Exposures

30. **During the last 12 months**, were you exposed directly (e.g., skin to skin contact) or indirectly (e.g., needle stick, cut from sharp object with visible blood or body fluid on it) to a patient's blood or body fluid?

- Yes
- No

**If yes:** a) Did you report the blood or body fluid exposure to your employer, faculty member, or preceptor?

- Yes
- No

31. **During the last 12 months**, have you had an infectious illness that was due to a known exposure at work?

- Yes
- No

**If yes:** a) What was it?

*Select all that apply:*

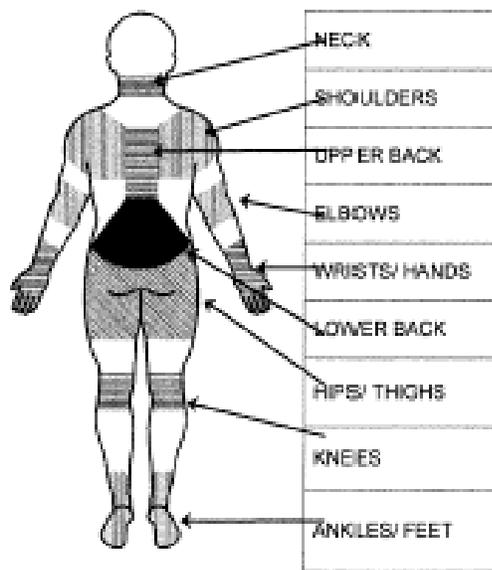
- Flu
- Gastroenteritis
- H1N1 virus (swine flu)
- Herpes (HSV)
- Mono
- Respiratory infection
- Staph infection/ MRSA
- Other skin infections (Impetigo, etc.)
- TB
- Other, please specify: \_\_\_\_\_

b) Did you report the illness to your employer, faculty member, or preceptor?

- Yes
- No

## Part V. Work-related Musculoskeletal Symptoms

The following questions ask about aches, pains, or discomfort in various parts of your body. In the body picture below you can see the approximate positions of the parts of the body referred to in these questions. Limits are not sharply defined, and certain parts overlap. You should decide for yourself in which part you have or have had trouble (if any).

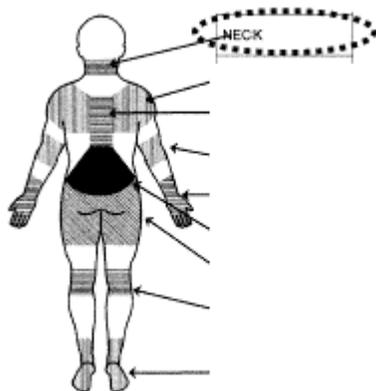


*\*Photo from Nordic Musculoskeletal Questionnaire*

32. In the last 12 months have you had symptoms including ache, pain, or discomfort in any of the body areas shown above?

- Yes
- No

**If yes: Please answer the following questions:**



33. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **neck**?

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **neck** symptoms including ache, pain, or discomfort that **prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No [*Skip to next page, Question 49*]

**If yes:** b) What is the total length of time (*days*) these **neck** symptoms **interfered with your** clinical experience or work-study duties?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal clinical experience or work-study duties as a result of your **neck** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your clinical experience or work-study duties as a result of your **neck** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **neck** symptoms required you to **miss a day of your** clinical experience or work-study duties?

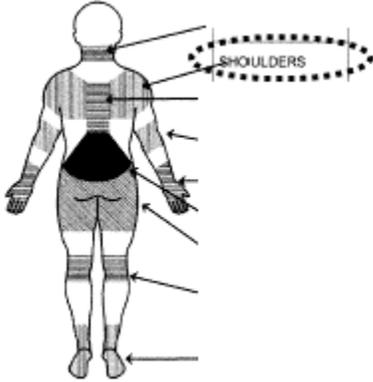
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **neck** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **neck** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal clinical experience or work-study duties?

- Yes
- No



34. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **shoulder**?

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **shoulder** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **shoulder** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **shoulder** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **shoulder** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **shoulder** symptoms required you to **miss a day of work**?

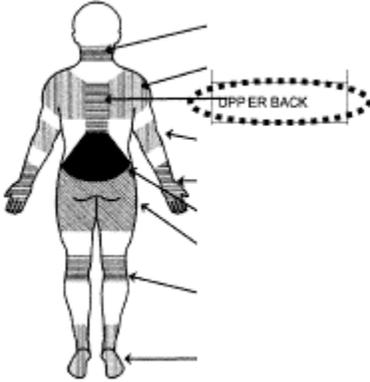
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **shoulder** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **shoulder** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



35. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **upper back**?

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **upper back** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **upper back** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **upper back** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **upper back** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **upper back** symptoms required you to **miss a day of work**?

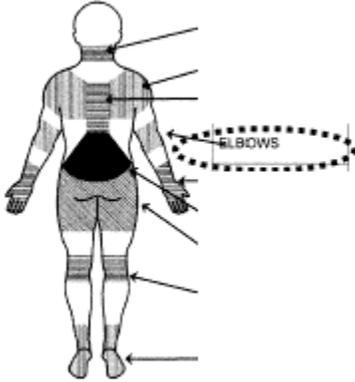
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **upper back** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **upper back** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



36. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **elbow or forearm?**

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **elbow or forearm** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No [*Skip to next page, Question 52*]

**If yes:** b) What is the total length of time (*days*) these **elbow or forearm** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **elbow or forearm** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **elbow or forearm** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **elbow or forearm** symptoms required you to **miss a day of work?**

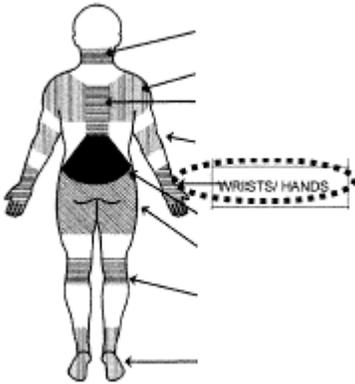
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **elbow or forearm** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **elbow or forearm** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



37. In the last 12 months have you had symptoms including ache, pain, or discomfort in your **wrists or hands?**

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **wrist or hand** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **wrist or hand** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **wrist or hand** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **wrist or hand** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **wrist or hand** symptoms required you to **miss a day of work?**

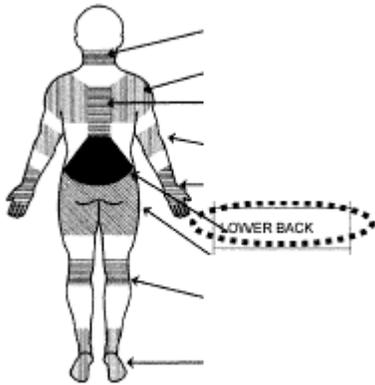
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **wrist or hand** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **wrist or hand** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



38. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **low back?**

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **low back** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **low back** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **low back** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **low back** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **low back** symptoms required you to **miss a day of work?**

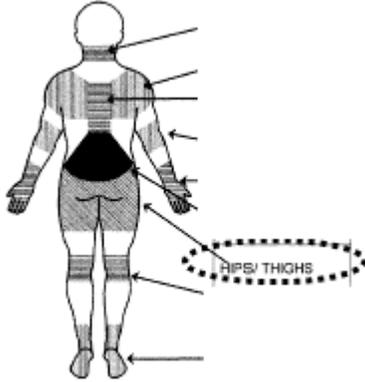
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **low back** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **low back** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



39. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **hip or thigh?**

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **hip or thigh** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **hip or thigh** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **hip or thigh** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **hip or thigh** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **hip or thigh** symptoms required you to **miss a day of work?**

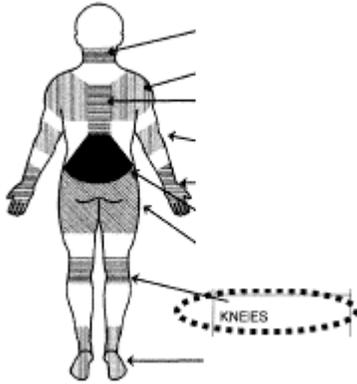
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **hip or thigh** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **hip or thigh** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



40. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **knees**?

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **knee** symptoms including ache, pain, or discomfort that **prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **knee** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **knee** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **knee** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **knee** symptoms required you to **miss a day of work**?

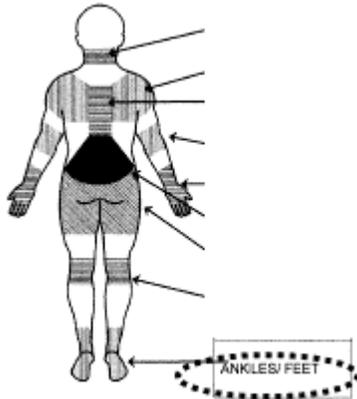
- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **knee** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **knee** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No



41. In the last 12 months have you had symptoms including ache, pain, or discomfort in the **ankle or foot**?

- Yes
- No

**If yes:** Please answer the following questions.

a) Have you at any time in the last 12 months had **ankle or foot** symptoms including ache, pain, or discomfort **that prevented you from doing or interfered with** your normal athletic training work or other activities?

- Yes
- No

**If yes:** b) What is the total length of time (*days*) these **ankle or foot** symptoms **interfered with your athletic training work** activity?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

c) Did you **modify or limit** your normal athletic training work activities as a result of your **ankle or foot** symptoms?

- Yes
- No

**If no:** c1) Did you feel you **should have modified or limited** your normal athletic training work activities as a result of your **ankle or foot** symptoms?

- Yes
- No

d) What is the total length of time (*days*) these **ankle or foot** symptoms required you to **miss a day of work**?

- 0 days
- 1-7 days
- 8-30 days
- More than 30 days

e) Did you **seek medical care** from a doctor, physical therapist, chiropractor, or other health care provider for your **ankle or foot** symptoms?

- Yes
- No

f) **In the past 7 days** have you had **ankle or foot** symptoms including ache, pain, or discomfort that prevented you from doing or interfered with your normal athletic training work or other activities?

- Yes
- No

## Part VI. Job Tasks and Demands

The next questions ask about the tasks and activities that you perform at your clinical experience or work-study internship.

43. In a typical week please estimate **how often** you performed the following tasks or experienced the following situations at *at your clinical experience or work-study internship* in the past 12 months.

	Select one:
a) Manually transfer or move patients (in clinic, on the field, etc.)	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
b) Manual orthopedic techniques including soft tissue work, massage, joint mobilizations, etc.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
c) Modality treatments including ultrasound, E-STIM, etc.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
d) Assisting patients with rehabilitation activities such as stretching, passive range of motion (PROM), resistive exercises, etc.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
e) Applying protective or preventive devices such as taping, bandages and wrappings	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
f) Applying and fitting braces and other protective equipment	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
g) Administering emergency care (spine immobilization, stabilize unconscious patient, AED)	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)

Continue rating tasks on next page.

43 (continued) In a typical week please estimate **how often** you performed the following tasks or experienced the following situations *at your clinical experience or work-study internship* in the past 12 months.

	Select one:
h) Carrying, lifting, or moving heavy materials or equipment (ice chests, water coolers, etc.)	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
i) Transportation-related tasks such as operating motor vehicles for work, motorized carts, etc.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
j) Caring for multiple patients at once	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
k) Working under time constraints and rushing	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
l) Working in inclement conditions (hot, cold, wet)	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
m) Working in awkward and cramped positions	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
n) Working in the same positions for long periods (standing, bent over, sitting, kneeling)	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
o) Bending or twisting your back in an awkward way	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)
p) Reaching or working away from your body	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes (about 10% to <25%) <input type="radio"/> Often (about 25% to <50%) <input type="radio"/> Frequently (50% or more)

44. This list describes things at *your clinical experience or work-study internship* in the past 12 months that could contribute to **job-related pain and injury**. Please indicate on a scale of 0 (no problem) to 10 (major problem), how much of a problem (if any) each item is for **you** by circling the appropriate number. If you do not perform these tasks or experience these situations select "NA".

	Circle one:											
	no problem <-----> major problem											
a) Performing the same task over and over	0	1	2	3	4	5	6	7	8	9	10	NA
b) Treating an excessive number of patients in 1 day	0	1	2	3	4	5	6	7	8	9	10	NA
c) Not enough rest breaks or pauses during the workday	0	1	2	3	4	5	6	7	8	9	10	NA
d) Work scheduling (overtime, irregular shifts, length of workday)	0	1	2	3	4	5	6	7	8	9	10	NA
e) Lack of staff or short-staffed	0	1	2	3	4	5	6	7	8	9	10	NA
f) Performing manual orthopedic techniques (joint mobilizations, soft tissue mobilization, etc.)	0	1	2	3	4	5	6	7	8	9	10	NA
g) Lifting or transferring dependent patients	0	1	2	3	4	5	6	7	8	9	10	NA
h) Assisting patients with rehabilitation activities (stretching, PROM, resistive exercises, etc.)	0	1	2	3	4	5	6	7	8	9	10	NA
i) Carrying, lifting, or moving heavy materials or equipment (ice chests, water coolers, etc.)	0	1	2	3	4	5	6	7	8	9	10	NA
j) Applying protective or preventive devices such as tape, bandages, and wrappings	0	1	2	3	4	5	6	7	8	9	10	NA
k) Administering emergency care (spine immobilization, unconscious patient, AED)	0	1	2	3	4	5	6	7	8	9	10	NA

*Continue rating activities on next page.*

45 (continued). This list describes things at *your clinical experience or work-study internship* in the past 12 months that could contribute to **job-related pain and injury**. Please indicate on a scale of 0 (no problem) to 10 (major problem), how much of a problem (if any) each item is for **you** by circling the appropriate number. If you do not perform these tasks or experience these situations select "NA".

	Circle one:											
	no problem <-----> major problem											
l) Working in awkward and cramped positions	0	1	2	3	4	5	6	7	8	9	1 0	NA
m) Working in the same positions for long periods (standing, bent over, sitting, kneeling)	0	1	2	3	4	5	6	7	8	9	1 0	NA
n) Bending or twisting your back in an awkward way	0	1	2	3	4	5	6	7	8	9	1 0	NA
o) Reaching or working away from your body	0	1	2	3	4	5	6	7	8	9	1 0	NA
p) Working near or at your physical limits	0	1	2	3	4	5	6	7	8	9	1 0	NA
q) Continuing to work while injured or hurt	0	1	2	3	4	5	6	7	8	9	1 0	NA
r) Inadequate training on injury prevention	0	1	2	3	4	5	6	7	8	9	1 0	NA
s) Working in inclement conditions (hot, cold, wet)	0	1	2	3	4	5	6	7	8	9	1 0	NA
t) Transportation-related tasks (motor vehicle, motorized cart)	0	1	2	3	4	5	6	7	8	9	1 0	NA
u) Inadequate sleep	0	1	2	3	4	5	6	7	8	9	1 0	NA
v) Other, please specify: _____	0	1	2	3	4	5	6	7	8	9	1 0	NA

46. Please indicate which of the following **strategies or actions** you take to **reduce work-related physical strain** on your body.

	Select one:
a) I get someone else to help me carry, move, or handle a heavy patient	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
b) I ask others to perform physically stressful tasks.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
c) I pause regularly so I can stretch and change posture.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
d) I adjust the table height or stool height before treating a patient.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
e) I modify the patient's position and/or my position.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
f) I warm up and stretch before performing manual techniques.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
g) I stop a treatment if it causes or aggravates my discomfort.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
h) I use electrotherapy instead of manual techniques to avoid aggravating an injury.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
i) I select techniques that will not aggravate or provoke my discomfort.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always
j) I use a different part of my body to administer a manual technique.	<input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Frequently <input type="radio"/> Almost Always

These next questions are about **job-related mental stress** that you may experience at work.

47. This list describes things at *your clinical experience or work-study internship* that could contribute to **job-related stress [mental]**. Please indicate on a scale of 0 (no problem) to 10 (major problem), how much of a problem (if any) each item is for **you** by circling the appropriate number. If you do not perform these tasks or experience these situations select "NA".

	Circle one:											NA
	no problem <-----> major problem											
a) Administering emergency care (spine immobilization, unconscious patient, AED)	0	1	2	3	4	5	6	7	8	9	10	NA
b) Interacting with athletes and patients	0	1	2	3	4	5	6	7	8	9	10	NA
c) Interacting with family members, parents or coaches	0	1	2	3	4	5	6	7	8	9	10	NA
d) Long work days (>10 hours)	0	1	2	3	4	5	6	7	8	9	10	NA
e) Long work weeks (>5 days/week)	0	1	2	3	4	5	6	7	8	9	10	NA
f) Irregular work schedule	0	1	2	3	4	5	6	7	8	9	10	NA
g) Workload greater than usual	0	1	2	3	4	5	6	7	8	9	10	NA
h) Inadequate staffing	0	1	2	3	4	5	6	7	8	9	10	NA
i) Job uncertainty	0	1	2	3	4	5	6	7	8	9	10	NA
j) Inadequate sleep	0	1	2	3	4	5	6	7	8	9	10	NA
k) Other, please specify: _____	0	1	2	3	4	5	6	7	8	9	10	NA

## Part VII. Second Job Information

48. In the past 12 months, have you had a **second job** outside of *your primary clinical experience or work-study internship* that you described above?

- Yes
- No

**If yes please answer the following:**

a) What was your second job? \_\_\_\_\_

b) Is this job athletic training-related?

- Yes
- No

c) Do you perform this second job year round?

- Yes
- No

d) Average hours per week at second job:

*Enter hours* \_\_\_\_\_

e) Does this second job require you to:

Select *all that apply*:

None

Lift or carry more than 25 pounds?

Lift or carry more than 50 pounds?

Twist or bend at the waist frequently?

Work in awkward postures, such as having to stay bent over for a while or hold arms up  
or in uncomfortable position for a while?

Lift repetitively, such as more than 3 lifts per minute?

## Part VIII. Health History

*These next questions are about you and your general health.*

49. What is your height?

*Enter feet:* \_\_\_\_\_

*Enter inches:* \_\_\_\_\_

50. What is your weight?

*Enter pounds:* \_\_\_\_\_

51. Are you currently under the care of a doctor or other health professional for any of the following?

*Select all that apply:*

None

Anxiety

Arthritis [*specify areas below*] \_\_\_\_\_

Asthma

Cardiovascular disease (CVD)

Depression

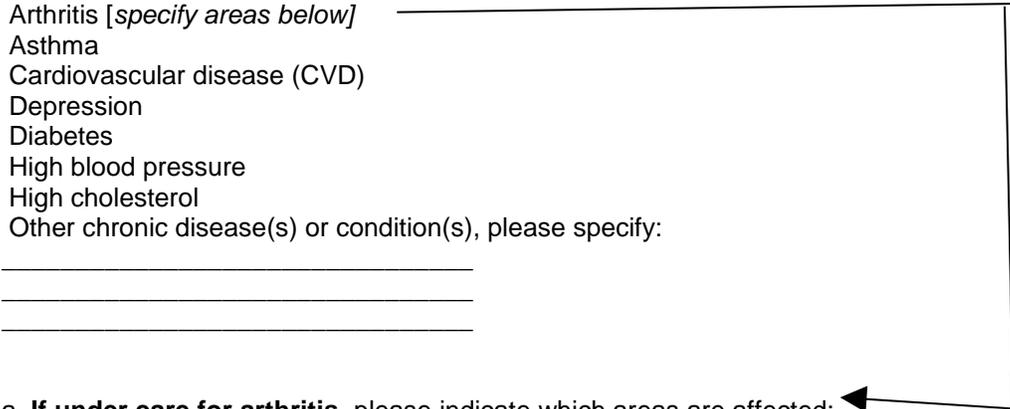
Diabetes

High blood pressure

High cholesterol

Other chronic disease(s) or condition(s), please specify:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

a. **If under care for arthritis**, please indicate which areas are affected: 

*Select all that apply:*

Neck

Shoulder

Elbow/forearm

Fingers/hands/wrists

Back

Hips

Knees

Ankle/feet

Other, please specify: \_\_\_\_\_

*These next questions are about physical activities (exercise, sports, physically active hobbies, etc.) that you may do in your **leisure** time.*

52. In a typical week do you do vigorous leisure-time physical activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?

- Yes
- No [*Skip to next question*]
- Unable to do vigorous activity [*Skip to next question*]

**If yes:** a) About how many total minutes per week do you do these vigorous leisure-time physical activities?

Minutes per week \_\_\_\_\_

53. In a typical week do you do moderate leisure-time physical activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?

- Yes
- No [*Skip to next question*]
- Unable to do moderate activity [*Skip to next question*]

**If yes:** a) About how many total minutes per week do you do these moderate leisure-time physical activities?

Minutes per week \_\_\_\_\_

54. In a typical week do you do leisure-time physical activities specifically designed to strengthen your muscles such as lifting weights or doing calisthenics?

- Yes
- No [*Skip to next question*]
- Unable to do strengthening activity [*Skip to next question*]

**If yes:** a) About how many days per week do you do these strengthening leisure-time physical activities?

Days per week \_\_\_\_\_

## Part IX. Ergonomics and your Education program

55. Over the last year, approximately how many hours have you spent in class per week?

56. Does your athletic training program have a specific ergonomics class tailored to athletic training?

Yes

No

57. If you are part of a Master's program, have you discussed YOUR proper body posture when working with a patient in any of your classes?

Yes

No

If yes, what have you discussed?

*Select all that apply:*

- How to adjust the table height or stool height before treating a patient.
- How to modify the patient's position and/or my position when performing a task
- How to use other pieces of equipment or electrotherapy instead of manual techniques
- Alternate body parts or strategies that can be used to administer a manual technique.
- Other: \_\_\_\_\_

## Part X. Demographics

57. What is your sex?

- Female
- Male
- Prefer not to answer

58. What is your age?

*Enter years:* \_\_\_\_\_

59. What is your ethnicity?

- Hispanic/Latino
- Not Hispanic/Latino
- Prefer not to answer

60. What is your race?

*Select all that apply:*

- American Indian/Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Black or African American
- White
- Prefer not to answer

61. You have completed the survey. If there is anything else you would like to share with us, please enter it in the space below.

For questions or assistance contact the Principal Investigator Kaitlin Gallagher at 479-575-5173 or send an email message to [kmg014@uark.edu](mailto:kmg014@uark.edu).

If you have any questions about your rights as a research subject, please contact the University of Arkansas Institutional Review Board (IRB) Office at (479)-575-2208