

CORRELATION BETWEEN PHYSICAL ACTIVITY AND JOB SATISFACTION
AMONG ATHLETIC TRAINERS

A THESIS

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INTRODUCTION

The job of an Athletic Trainer often requires them to be the first one at an event and the last one to leave. They are usually required to be at every practice, game, and even off days to provide treatment or rehabilitation. Hours can change from day to day and season to season. Athletic Trainers may find it impossible to form a regular schedule and routine in their daily living. It is important that these individuals remember to care for themselves and their health so that they are able to perform their jobs to the best of their ability and to enjoy a long and healthy life.

It may be thought that because Athletic Trainers are considered allied healthcare professionals, they "practice what they preach" and are exercising regularly but this may conflict with the hours and demands that the profession places upon individuals. It has been found that Athletic Trainers can have higher than normal levels of burnout and stress and lower than normal levels of job satisfaction that may lead to poor health practices.¹⁻³ Job satisfaction can be thought of as having a sense of pride and

accomplishment in one's job and enjoying one's day to day tasks.⁴ These levels of stress, burnout, and job dissatisfaction have been found to be caused from lack of control over scheduling and staffing patterns in the work place.^{3,5} Meaning, these individuals are unable to have an opinion or say in the hours or specific time they will be working. Staffing patterns refer to the particular way that individuals at a facility are organized in a chain of command.⁵

It is known that exercising and participating in physical activity can help lower stress levels and give a variety of overall health benefits.^{6,7} Several studies have examined the physical activity levels of Athletic Trainers and have produced somewhat conflicting results.⁸⁻¹¹ It is the general consensus that Athletic Trainers on average have higher physical fitness levels than the general population but do not typically meet guidelines set forth by the American College of Sports Medicine.^{7,8} Because they do not meet physical fitness guidelines, some believe that Athletic Trainers are not "role models for health behavior".⁹ Other studies have also compared the physical fitness levels of Athletic Trainers in different job settings, and again found conflicting results.^{9,10}

Other allied healthcare professions such as Physical Therapy, nursing, and physicians have attempted to study their physical fitness habits as well.¹²⁻¹⁶ Physical Therapists and nurses found that their respective members have higher rates of physical activity than the general public and are meeting ACSM guidelines.¹²⁻¹⁴ In one study physicians reported exercising regularly at a level 30% than the general population.¹⁵ Another study found that physicians who reported healthier habits regarding exercising, eating, and smoking were less likely to experience anxiety, job stress, and had great life satisfaction.¹⁶ Although these professions may be similar in some aspects of the job, it is important to remember that hours and consistency of the job are very different and typically far more stable than those of an Athletic Trainer.

Because physical activity can help lower stress and gives numerous other health benefits it is important for all individuals to exercise regularly but particularly those who are exposed to higher levels of stress and burnout, such as Athletic Trainers.^{5,17} By working to lower these stress levels, these individuals could potentially find themselves happier thus raising their job satisfaction levels.

This study will attempt to determine if a correlation exists between Athletic Trainer's perceived physical activity and job satisfaction scores. It will also attempt to compare Athletic Trainers of different job settings to determine if there is a significant difference in physical activity scores between job settings as well as a significant difference in job satisfaction and different job settings. Implications of this study may emphasize the vital importance of routine physical activity for the overall quality of life of Athletic Trainers.

METHODS

The primary purpose of this study was to examine the level of physical activity and job satisfaction for Athletic Trainers. The study also attempted to determine if a significant difference existed between job settings for physical fitness and job satisfaction. This section includes the following subsections: Research Design, Subjects, Instrumentation, Procedures, Hypothesis, and Data Analysis.

Research Design

This research was a descriptive study using a questionnaire. The two dependent variables used in this study were physical activity scores and job satisfaction scores as determined by a calculated numerical score. The strengths of the study were the reliable and validated Baecke Questionnaire of Habitual Physical Activity and the Job Satisfaction Survey¹⁸⁻²² (JSS). The questionnaire also included demographic questions allowing the researcher to describe the typical survey respondent as well as make comparisons between groups. The survey was sent to 1,000

participants via the National Athletic Trainers' Association survey system.

Subjects

Participants used in this study consisted of 1,000 certified Athletic Trainers chosen at random from the National Athletic Trainers' Association survey system. As of March 2011 there were 27,779 certified Athletic Trainers who were members of the NATA.²³ The recommended target sample size for this population is 377-379 individuals.²⁴ A response rate of 113-151 is considered "average" for a web-based survey of this population, while a response of 188-190 is considered "good" and 226-227 is considered a "very good" for this target sample size.²⁵

Upon approval from the California University of Pennsylvania Institutional Review Board (Appendix 1) each subject was asked to participate in an online survey that took approximately 20 minutes to complete. The survey was distributed through the program Survey Monkey™ and was sent through a link in an email distributed to participants. Each email contained a cover letter explaining the purpose of the study as well as risks and benefits of participation (Appendix C2). Informed consent was assumed by the

subject's participation in the survey. Each participant's identity remained confidential and was not included in the study.

Instrumentation

The custom made survey used for this study incorporated The Baecke Questionnaire of Habitual Physical Activity¹⁸ and the Job Satisfaction Survey^{©19} (JSS) Copyright Paul E. Spector 1994, All rights reserved. Both surveys were used in their entirety. Additional demographic questions were added to include questions on job setting, job title, gender, years of practice, and age. The survey was called The Physical Activity and Job Satisfaction Questionnaire for Athletic Trainers (Appendix C3). The Physical Activity and Job Satisfaction Questionnaire for Athletic Trainers included seven demographic questions, 17 questions from The Baecke Questionnaire of Physical Activity¹⁸, and 36 questions from the Job Satisfaction Survey^{©19}.

The Baecke Questionnaire was divided into three sections: work, exercise, and non sport leisure activity. Each question utilized a five-point Likert scale for responses using a 1 (never) to a 5 (always/very often). Each

section was scored using a special formula, rounding each section to a tenth of a point. The maximum point for each section was five points; leading to a range of total scores from three to fifteen points.¹⁸ The total score was then used as the participants "physical fitness score". The JSS© utilizes a nine facet scale to look at individual's satisfaction with their job. These nine subsections include pay, promotion, supervision, fringe benefits, contingent reward, operating procedures, coworkers, nature of work, and communication.²¹ Thirty-six questions are asked and scored on a six-point Likert scale from 1 (disagree very much) to 6 (agree very much) and a point value is assigned to each response. Nineteen of the questions are worded negatively and scores are reversed for those particular questions. For this study only the composite score of all questions was utilized to give individuals their "job satisfaction score". All subjects were asked to answer questions honestly and to the best of their ability.

Both surveys in this studies have been utilized in previous research and have had the reliability tested. N. Van Saane et al²⁰ looked at the Job Satisfaction Survey© using a test re-test and running a Pearson's correlation coefficient found the reliability to be .71. The Baecke Questionnaire of Habitual Activity has been tested for

reliability using several different populations.

Philippaerts and Lefevre²¹ used a test-retest method and ran a intraclass correlation (ICC) on a group of all male participants and found the reliability to be .86. Ono et al²² also used a test-retest method and an ICC on a group of all females and found the reliability to be .87. When using a Pearson's correlation test correlations greater than .7 are considered strong.²⁶ Values for ICC tests greater than .75 they are considered strong and substantial.²¹

Validity was also assessed for these instruments by the same authors. Ono utilizes a Spearman's rank correlation coefficient to test for the convergent validity of Baecke Questionnaire of Physical Activity against a pedometer and found criterion validity to be .49 which is found to be a moderate correlation.²² Van Saane et al tested the Job Satisfaction Survey against the Job Descriptive Index using a multi-trait multi-method and found convergent validity to be .61-.8 which is considered moderate to high.²⁰

Procedure

Once IRB approval was obtained, a request was sent to the NATA District II Secretary asking that the survey be

sent to a random sample of 1,000 certified Athletic Trainers. The request included a copy of IRB approval confirmation, the survey instrument, as well as paperwork describing the requested population. The request was then forwarded from the District II Secretary to the appropriate department within the NATA. The NATA then sent an email with a copy of a cover letter (Appendix C2) and a link to the survey via Survey Monkey™ to 1,000 BOC certified Athletic Trainers. The cover letter described the purpose of the study, indicated that subjects were not required to participate, and confirmed that their identity will remain anonymous. Participants were asked to complete the survey as soon as possible. Two reminder emails were sent by the NATA to all participants on the 5th and 12th day after the initial e-mail was sent. These dates were chosen due to convenience with the NATA survey system. The reminder email also included a similar cover letter and link to the survey. Once participants completed the survey by clicking submit they were taken to a page thanking them for their contribution to research and allow them to be taken to the California University of Pennsylvania website. All completed surveys were returned electronically to the researcher and then analyzed.

Hypotheses

The following hypotheses are based on previous research and the researcher's intuition after a review of the literature. Significance will be set at an alpha level of .05.

1. There will be a positive relationship between physical activity scores and job satisfaction scores.
2. There will be a significant difference between job settings for physical fitness scores and job satisfaction scores.

Data Analysis

All data will be analyzed using PASW version 18.0 for Windows at an alpha level of $P \leq 0.05$. The research hypotheses will be analyzed using a Pearson Product Moment Correlation to determine the relationships between physical fitness scores and job satisfaction scores. Hypothesis 2 will be tested with an MANOVA to compare physical fitness scores and job satisfaction scores between Athletic Trainers in different employment settings.

RESULTS

Demographic Data

Certified Athletic Trainers that were members of the National Athletic Trainers' Association (N = 286) voluntarily participated in this study. The survey was originally sent out to a random sample of 1,000 members of the NATA. Two hundred fifty eight of these surveys were fully completed and able to be analyzed for their data, a 25.8% overall response rate. This places the response rate at "very good" for the target sample size of the population.²⁵

It is important to note that of the twenty eight surveys that were incomplete twenty five were completed 2/3 of the way, meaning individuals completed the Baecke Questionnaire of Habitual Physical Activity and demographics questions but not the Job Satisfaction Survey©. This was speculated to be caused from the length and the time it took to complete the survey. The survey was formatted into 3 separate sections with the JSS© being the third and longest portion.

The following tables (Tables 1-6) represent various demographic data regarding the participants in this study.

Table 1 represents gender information about these Athletic Trainers.

Table 1. Gender of Participants

Classification	Frequency	Percent
Female	132	51.2
Male	125	48.4
No Response	1	.4

Table 2 represents the NATA district that the Athletic Trainer is employed.

Table 2. Demographics of District

District	Frequency	Percent
I	19	7.4
II	42	16.3
III	36	14.0
IV	51	19.8
V	18	7.0
VI	15	5.8
VII	13	5.0
VIII	27	10.5
IX	24	9.3
X	13	5.0

Table 3 represents the age and years certified as an Athletic Trainer.

Table 3. Characteristics of Athletic Trainers

Characteristic	Range	Mean \pm SD
Age	22-67	34.97 \pm 10.537
Years Experience	.5-40	11.77 \pm 9.5808

Table 4 represents the highest degree earned by the Athletic Trainer

Table 4. Highest Degree Earned

Classification	Frequency	Percent
Bachelor's	94	36.4
Master's	151	58.8
Doctorate	12	4.7
No Response	1	.4

Table 5 represents the job title of the Athletic Trainer.

Table 5. Job Title

Classification	Frequency	Percent
Head Athletic Trainer	100	38.8
Asst. Athletic Trainer	60	23.3
Program Director	10	3.9
Professor	9	3.5
Graduate Assistant	22	8.5
Other	57	22.1

Table 6 represents the employment setting of the Athletic Trainer.

Table 6. Employment Setting

Classification	Frequency	Percent
Clinic	19	5.4
Clinic/High School	26	10.1
College/University	111	43.0
High School	59	22.9
Hospital/High School	15	5.8
Industrial	8	3.1
Military/Government	1	.4
Performing Arts	1	.4
Professional Athletics	3	1.2
Sports Club/Youth Sports	0	0.0
Other	15	5.8

Participants from Military/Government, Performing Arts, Professional Athletics, and Sports Club/Youth Sports were not represented highly enough in the sample and their

information was unusable for data collection utilizing job settings.

Hypotheses Testing

The following hypotheses were tested for this study with an alpha level of .05 for significance

Hypothesis 1: There will be a positive relationship between physical activity and job satisfaction.

A Pearson Product Moment Correlation was used to test for a correlation between physical activity scores and job satisfaction scores for certified Athletic Trainers. An insignificant weak positive correlation was found ($r(255) = .024, p > .05$) implying that physical fitness scores are not related to job satisfaction scores. The results can be seen in Table 7.

Table 7. Pearson Product-Moment Correlation between Physical Fitness Scores and Job Satisfaction Scores

Variable	n	r	P
Physical Fitness Scores and Job Satisfaction Scores	257	.024	.702

Conclusion: Physical fitness scores are not related to job satisfaction.

Hypothesis 2: There will be a significant difference between job settings for physical fitness and job satisfaction.

The physical fitness scores and job satisfaction scores from Athletic Trainers in different job settings were compared using a factorial MANOVA. No significant effect was found ($\Lambda(10,500) = .955, p > .05$). Neither physical fitness scores nor job satisfaction scores were significantly influenced by employment setting.

Table 8. A MANOVA for Job Satisfaction Scores, Physical Fitness Scores and Employment Settings.

Source	Dependent Variable	Type III Sum of Squares	df	MS	F	P
	PF*	11.990	5	2.398	1.551	.174
	JS**	2436.297	5	487.259	.826	.532

*PF (Physical Fitness), **JS (Job Satisfaction)

Conclusion: Employment setting has no significant effect on job satisfaction scores and physical fitness scores.

Additional Findings

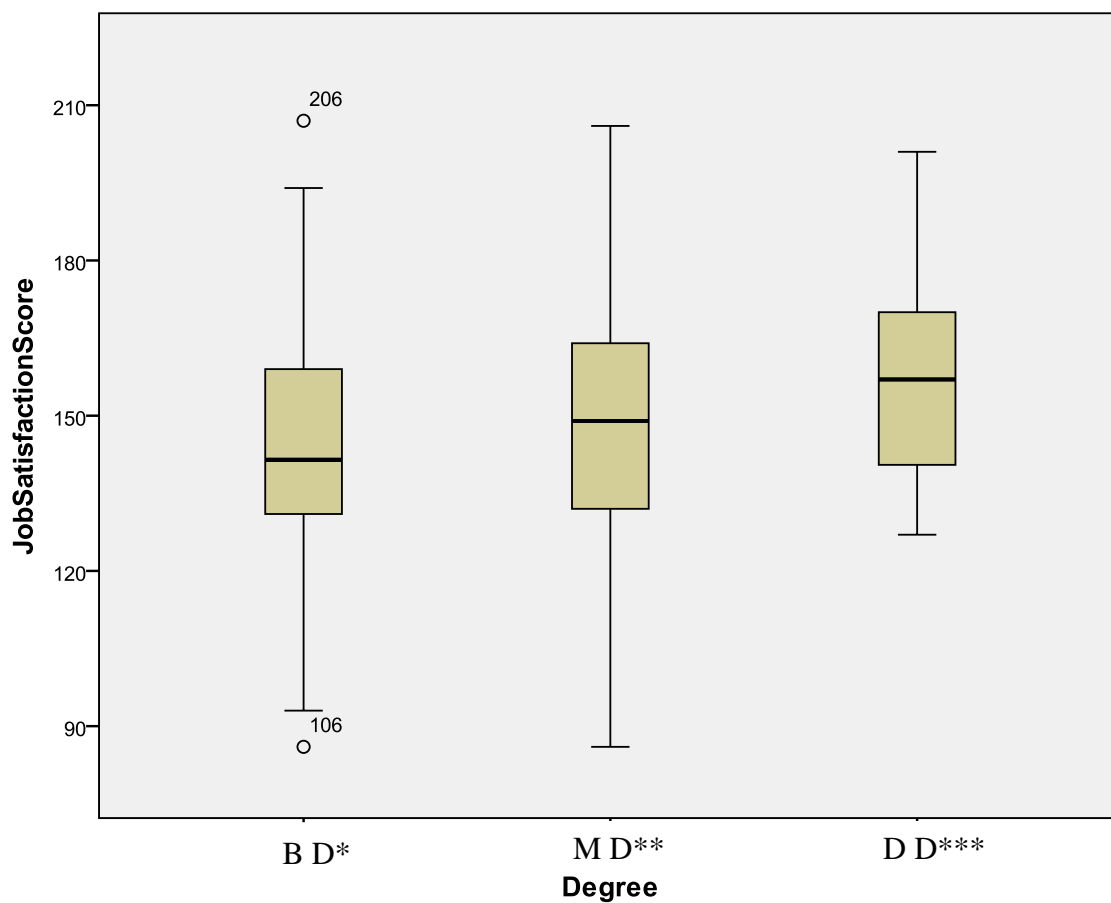
A Pearson Product Moment Correlation was used to test if there was a correlation between years as a certified Athletic Trainer and job satisfaction scores. A weak positive relationship was found ($r(255)=.133, p<.005$), indicating a significant linear relationship and implying that job satisfaction is positively related to years certified as an Athletic Trainer. The results can be seen in Table 9.

Table 9. Pearson Product-Moment Correlation between Years Certified and Job Satisfaction Scores

Variable	n	r	P
Years Certified and Job Satisfaction Scores	257	.133	.033

Conclusion: Job Satisfaction Scores are positively correlated to Years Certified as an Athletic Trainer.

Figure 1 looked at job satisfaction scores based upon the highest degree an individual had earned. The box depicts all the job satisfaction scores for the sample, while the solid black line within the box represents the median job satisfaction score. As the median scores appear to increase with degree earned, they are not found to increase significantly.



*BD= Bachelor's Degree MD= Master's Degree DD=Doctorate Degree

Figure 1. Job Satisfaction Based Upon Highest Degree Earned

Figure 2 looked at physical fitness scores based upon gender. The box depicts all the physical fitness scores for the sample, while the solid black line within the box represents the median physical fitness score. Median physical fitness scores for females and males are found to be very similar within this sample.

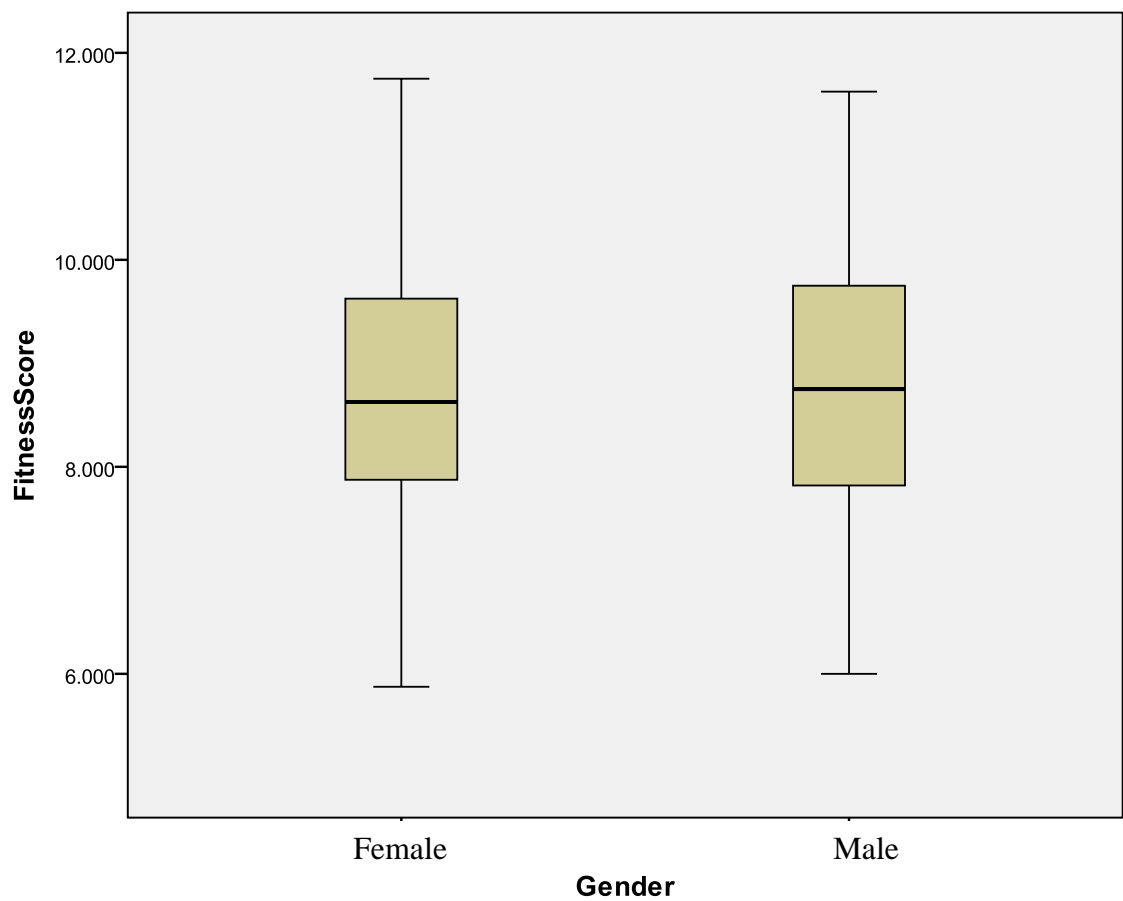


Figure 2. Fitness Scores Based Upon Gender

DISCUSSION

The following section will include: 1) Discussion of Results, 2) Conclusions, and 3) Recommendations

Discussion of Results

The main focus of this study was to find a potential correlation between physical fitness scores and job satisfaction scores among certified Athletic Trainers. These scores were also compared with other variables such as gender, years certified, highest degree earned, and employment setting.

It may be assumed that because Athletic Trainers are allied healthcare professionals, they practice healthy exercise habits daily. Previous studies have found that although Athletic Trainers tend to be healthier than the general population they are not meeting daily fitness guidelines set forth by the American College of Sports Medicine.⁷⁻⁸ Due to these findings some believe that Athletic Trainers are not "role models for healthy behavior".⁹ Other research has attempted to compare physical activity of Athletic Trainers in different job settings and have failed to find consistent results.

Previous research has also found that Athletic Trainers have higher than normal levels of burnout and lower levels than normal of job satisfaction than other professions.¹⁻³ These levels have been attributed to lack of control over scheduling, staffing patterns, inconsistent hours, and an inability to create a routine schedule around one's job.^{3,5} It is a known fact that exercising and other means of physical activity can help lower one's stress level and allow those individuals to reap a variety of other health benefits.⁶⁻⁷

Hypothesis 1 stated that there would be a positive correlation between physical fitness scores and job satisfaction scores. The researcher hypothesized that due to previous findings, individuals who have more time in their routine to be physically active are able to release stress and tension and may avoid burnout, which leads to lower job satisfaction.^{1-2,6,7} In addition, those Athletic Trainers who have more routine hours with their job can find times daily to be physically active and may have higher satisfaction due to a more consistent schedule.

Other healthcare professionals whose physical fitness habits have been studied such as Physical Therapists, physicians, and nurses have higher rates of physical activity than the general population. Physical Therapists

and nurses also have been found to generally meet daily fitness guidelines.^{12,13} Two studies on Physical Therapists by Chevan et al and Galzer-Waldman et al found that population to exceed ACSM guidelines as well as those of other allied healthcare professions.^{12,13} The authors felt this was due to the fact that Physical Therapists work to educate their patients about the importance of physical activity and that "movement plays a central role in the profession of physical therapy", meaning that already active individuals may be more inclined to pursue a career in that particular field.¹² Both of these statements can be true of the Athletic Training profession.

A previous study by Lawrence et al found that physicians who reported healthier habits with eating, drinking, smoking and exercising experienced less anxiety, job stress, and had greater life satisfaction.¹⁶ The professions mentioned are not known to have higher than average levels of burnout or lower than normal levels of job satisfaction. These studies lead the researcher to believe that there may be a correlation between physical fitness and job satisfaction.

It was found that there was no significant correlation between physical fitness scores and job satisfaction scores. The insignificant correlation that existed was

positive and considered very weak. At the present time no published research could be found that utilizes a correlational test between physical fitness scores and job satisfaction scores for Athletic Trainers or any other profession. Athletic Trainers may differ from other healthcare professionals in fitness levels and job satisfaction because of their potential for an inconsistent and uncontrollable schedule. There may also be other variables present in Athletic Trainers jobs or lives that do not affect other allied healthcare professionals.

Hypothesis 2 stated that there would be a significant difference between job settings for physical fitness scores and job satisfaction scores. Cuppett et al utilized the Baecke Questionnaire of Physical Activity and found that Athletic Trainers working in the clinical setting had the highest mean activity score of all employment settings and scored significantly higher than those working in the high school and collegiate setting.¹⁰ Oki also utilized the Baecke Questionnaire of Physical Activity but found no significant difference between employment settings.⁹ At the present time these are the only published study to compare physical fitness scores and employment settings for Athletic Trainers.

As for previous studies looking at Athletic Trainers' job satisfaction, the research has primarily focused on what factors are causing lower job satisfaction and have each looked at one particular employment setting such as the high school or Division I collegiate setting.^{3,5,28} Previous research found that the main factors in low job satisfaction are high volumes of work, low administrative support, lack of control over schedule, and staffing patterns.^{3,5} There is no published research comparing both job satisfaction and physical activity against employment settings.

The previous research performed in these areas has been both conflicting and incomplete. It was hypothesized by the researcher that Athletic Trainers who work in settings with more stable hours and schedules such as clinics and hospitals would have higher fitness scores and job satisfaction as opposed to individuals who worked in the collegiate or high school setting, which may have less consistent schedules and higher volumes of work.

No significant difference was found between job settings for physical fitness and job satisfaction scores. These results indicate that the setting one works in may be indifferent as to whether their job satisfaction and physical fitness scores are considered high or low. These

scores may be more dependent on individual motivation, personal life, health habits or other factors. Individual personalities, as well as the way one adapts to and handles stress may also play a role as to how one perceives their overall job satisfaction.

It is important to note that due to low subgroup response rates, individuals who work in the military/government, performing arts, sports club/youth sports and professional athletes were not included in this portion of the data analysis. It would be interesting to further investigate as to why these particular subgroups were nonresponsive or not represented highly enough in this sample.

In addition to the two hypotheses, several statistical analyses were performed to obtain additional findings. When looking at years certified as an Athletic Trainer a significant weak correlation was found with job satisfaction scores. Meaning, the more years an individual was certified, and presumably working as an Athletic Trainer, the more satisfied they were with their job. The researcher hypothesized that this could be due potentially to higher wages, higher status within an organization, or more job stability. It is possible that the longer an

individual is in the field the more chance they could have to explore and to find their ideal employment setting.

Another interesting finding is illustrated in Figure 1; showing that the higher degree one holds the higher the median scores for job satisfaction. While scores appear to increase with highest degree earned it was found using a one-way ANOVA that scores did not increase significantly. It is possible that Athletic Trainers with higher degrees may have more control and choice over the setting that they work in. They may also supervise or instruct other Athletic Trainers or health care professional below them thus being able to eliminate some factors that cause job dissatisfaction such as lack of control over scheduling and staffing patterns. Using a larger and evenly dispersed sample size may provide a more accurate portrayal of the results.

Figure 2 compared physical fitness scores between genders. (Females being 1 and Males being 2) The scores for both sexes are quite similar, which was consistent with previous studies by Oki and Budruck et al.^{9,11} This finding was inconsistent with Cuppett et al. who found females to have a higher activity level.¹⁰

Conclusion

Upon reviewing the results of this survey it can be concluded that there is not a significant correlation between physical fitness scores and job satisfaction scores for certified Athletic Trainers but that research should not cease in this area. A very weak correlation did exist and because this was the first study of its type, further research with these variables is necessary. It has been found in several studies that Athletic Trainers do not meet ACSM guidelines for daily physical fitness and that they suffer from higher levels of burnout and lower levels of job satisfaction.^{7,8,13,14} Although these theories may be correct the two variables may not directly influence each other.

It is also possible that the sample collected was not an adequate portrayal of the population. Several employment settings were not represented in high enough numbers to be used in data collection. Perhaps individuals in the settings not represented lack adequate time needed to complete the survey and could potentially mean these individual are overworked which may have influence on either their physical fitness score or job satisfaction score. If these results are to be generalized to the entire

occupation a more equal sample size of different employment settings is warranted.

Employment settings were found to not influence job satisfaction and physical fitness scores. Other variable may be at fault for influencing physical fitness levels and lower than normal job satisfaction levels for Athletic Trainers. It is the goal of future research to determine what those variables are and how to adjust them in order to raise physical fitness habits and job satisfaction levels for Athletic Trainers.

Recommendations

It is a known fact that both physical fitness and job satisfaction are important for an individual in any work setting and Athletic Trainers are no different. If further research is to be performed on these variables it may be necessary to seek a larger sample size and to stress the importance of completing the questionnaire. Twenty five participants in this study filled the first half of the questionnaire but were unable to finish, making their data unusable. A larger number of responses and a more equal representation of job settings may provide more accurate

results, as well as assist in making results more generalized to the entire population.

At the time of this study there was no published research found that directly compared physical fitness and job satisfaction for Athletic Trainers. It would be beneficial for future studies to use other instruments to measure physical fitness and job satisfaction, potentially ones shorter in length, in order to gain a higher response rate. It would also be worth researching other variables in Athletic Trainer's individual lives that influence physical fitness levels and job satisfaction scores.

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APPENDICES

APPENDIX A
Review of Literature

REVIEW OF LITERATURE

An Athletic Trainer by definition is an "allied healthcare professional(s) who collaborates with physicians to optimize activity and participation of patients and clients."¹ Athletic Trainers can be found in numerous settings such as high schools, collegiate sports, professional sports, clinics, hospitals, industrial settings and more. Because of the demanding and untraditional hours a "normal" 40 hour work week schedule may be impossible to obtain.

As an allied health care professional who traditionally works with physically active it may be assumed that Athletic Trainers "practice what they preach" and set an example to their patients and clients they serve. For some this may be an impossible feat due to workday length and time of day as well as job expectations. It is generally known that physical fitness is essential for a healthy life but staying physically active can also have additional health and wellness benefits such as helping to lower stress and assist in keeping individuals mentally healthy.² Several allied health care professionals have had their personal fitness and health habits examined as well and can be compared to Athletic Trainers. It may be

important to determine the implications that fitness levels and time for physical activity correlate with job satisfaction.

Athletic Training Profession

Athletic Training has dramatically changed as a profession throughout the years and continues to grow and evolve with time. According to the Board of Certification, which is the accrediting body of Athletic Trainers,

"Certified Athletic Trainers are healthcare professionals who are experts in injury prevention, assessment, treatment and rehabilitation, particularly in the orthopedic and musculoskeletal disciplines. Athletic training has been recognized by the American Medical Association (AMA) as an allied healthcare profession since 1990."³

Athletic Trainers can be found in a wide variety of settings from collegiate sports, professional sports, high school settings, clinics and hospitals, the military, industrial settings, and even in performing arts and public safety.¹ As the field continues to grow, different job

settings and opportunities continue to open up for Athletic Trainers and expand the field to even larger range of coverage and practice.

Traditionally Athletic Trainers are the first staff members at a game and the last one to leave afterwards. Often, they are expected to come in on off days to give treatments or rehabilitation. Scriber and Alderman called this career an "intensive profession" and felt that Athletic Trainers were at risk for high stress levels and must strive to find ways to balance out their personal and professional lives.⁴ They blame the stress on long hours, low paychecks, numerous responsibilities, limited control over schedules, and the wide variety of job expectations.

McChesney and Peterson found that job dissatisfaction and burnout are on the rise for Athletic Trainers because of demands placed on them from athletes and employers.⁵ They state that there is a direct correlation between job stress and job dissatisfaction. Generally if one suffers from higher stress at their job than job satisfaction is lower.⁵ Because of some of the settings that Athletic Trainers may work in their schedules can vary dramatically. Hours may vary on a day to day basis and may change with the season of the athletes or clients they are working with. For some, this may be challenging to find a consistent schedule and

may leave some without adequate time to tend to their own personal needs.

Importance of Physical Activity

Physical activity was defined by the US Department of Health and Human Services as "bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure".⁶ It is general common knowledge that physical activity is beneficial to one's health, although the different specific benefits may not be as clearly known. There also may be discrepancy on frequency and intensity of workouts that are recommended for individuals each week. The American College of Sports Medicine (ACSM) recommends 3-5 days of physical activity a week at an intensity of 55/65-90% of maximum heart rate for 20-60 minutes for cardiorespiratory fitness and body composition in their physical activity position statement.⁶ ACSM also recommends incorporating resistance and flexibility training. The American Heart Association (AHA) recommends moderate to vigorous aerobics for 30 minutes for "most days of the week" at 50-85% of one's maximum heart rate.⁷ The AHA also mentioned that these 30 minutes can be accumulated in 10 or 15 minute separate sessions throughout

the day. ACSM mentions that even low amounts of physical activity can reduce the risk for certain chronic degenerative diseases such as diabetes and cardiovascular disease and can also help speeding up one's metabolic fitness. It can also help prevent against coronary artery disease, hypertension, osteoporosis, and obesity.⁶

Miles mentioned in his research that physical activity also protects against high blood pressure, stroke, colon and breast cancers and can also affect other health "outcomes" such as one's mental health, fall rates, and other injuries.² It is clear that physical activity is not only beneficial but it is critical to maintaining a healthy lifestyle alongside other factors such as healthy eating, adequate sleeping and not partaking in risky behaviors such as smoking and excessive drinking.

Links Between Physical Fitness and Lowered Stress

Another important link between health and physical fitness is fact that higher levels of physical fitness can help lower stress levels. Multiple studies have been conducted regarding Athletic Trainers having high stress and burnout rates due to demands of the job that were mentioned earlier.⁵ If a relationship does exist between

higher levels of physical fitness and lowering stress it may make it vitally important for Athletic Trainers to partake in daily exercise in order to help reduce harmful side effects of stress and potential burnout.

A study by Gauerke examined nursing students and a possible correlation between exercise amount and stress levels.⁸ Participants were given an exercise history questionnaire, the Health Problems Inventory and questions about their perceived fitness. The study found a significant relationship between fitness levels and lower stress as well as in those who perceived themselves as physically fit.⁸ Another study by Guszowska looked at high school student and how physical fitness affects psychological distress and overall health over two years.⁹ Results found that students with intense stress had lower moods, lower level of positive well-being, and lower health. The author felt that physical fitness may be a critically important factor in helping deal with stress.

Hamer et al published a study in the *British Journal of Sports Medicine* that surveyed 19,842 people and looked at the relationship between physical activity and mental health.¹⁰ The survey measured self reported physical activity and used the General Health Questionnaire (GHO-12) as well. It was found that those individuals who

participated in any form of physical activity had lower risks of psychological distress. Moderate reductions of psychological distress were associated with less frequent or less intense activity such as housework and walking. The strongest effect for lower psychological distress came with sport participation. Researchers concluded that one can benefit mentally from as little as 20 minutes per week of physical activity although the greatest reduction of mental health risks came with higher intensity or higher volume of activity.

Research clearly shows that physical activity can help lower feelings of stress even in small amounts. As a result, Athletic Trainers will benefit from setting aside time in their schedule for physical activity which can help to reduce stress from their job and life that could potentially lead to burnout.

Physical Activity for Athletic Trainers

At this time there are several studies that have been performed that examine Athletic Trainer's physical activity levels and health habits, however each study focuses on a slightly different topic.

Groth et al used a web-based survey to examine weekly exercise amount, composite health score, nutrition habits, and drinking and smoking habits. Researchers hoped that as health care providers Athletic Trainers would be "role models for health behavior".¹¹ The study found that Athletic Trainers generally had better health and fitness habits than the rest of the general population despite the fact that most did not meet the American College of Sports Medicine weekly physical activity guidelines. They also concluded that Athletic Trainers were not the ideal role models for healthy lifestyles.

A study by Oki looked at physical activity levels of Athletic Trainers and hypothesized that they would be at a higher level of activity than the general population so that they could be "adequate role models and educators." It was also thought that Athletic Trainers in the clinical setting would have high overall activity level, females would have high leisure activity and males would have higher total activity.¹² Oki utilized the Baecke Questionnaire of Habitual Physical Activity and measured work activity level, sport activity level, leisure activity level as well as total activity level. It was found that there was no significant difference in total activity between job settings or gender and there was a significant

weak positive relationship between years of experience and leisure activity.

Another study by Cuppett et al also used the Baecke Questionnaire of Habitual Physical Activity to determine physical activity of Athletic Trainers in the Midwest region of the United States.¹³ In this research total fitness indexes were found to compare employment setting, position, and age. They found that Athletic Trainers in the clinical setting had the highest mean activity score and were significantly higher than high school and collegiate Athletic Trainers.¹³ Athletic Trainers in the high schools and clinics had significantly higher work indexes than any other setting. It was also found that females had higher activity levels and the mean total activity index of those over 36 years old was significantly lower. There was no significant different in mean totally activity level by employment position.¹³

Budruck et al attempted to understand physical activity participation and leisure constraints of Athletic Trainers. They originally felt that despite the fact that Athletic Trainer are ultimately trained to be fit and healthy they may end up ultimately having to sacrifice their own health to meet job obligations. Their study attempted to compare ideal and actual physical activity

participation as well as the effect of age, gender, leisure constraints on physical activity. The research found that actual physical activity participation rates were much lower than the respondent's ideal goal.¹⁴ They found no major differences between men and women and that age, gender, intrapersonal and interpersonal constraints did not significantly influence physical activity participation. They did find that the effect of structural constraints on physical activity participation was both significant and negative. The author's suggestions were that Athletic Training employers should encourage Athletic Trainers to participate in wellness programs that address quality of life issues and provide professional support such as time management skills.

It is clear that although attempts have been made to examine Athletic Trainers and their physical activity and health habits that there are discrepancies in the research. Based on these discrepancies and conflicting results it is important that this area be examined more in-depth to try and find more consistent results. The current study will attempt to fill a gap in the research that could implicate important finds for the profession and potentially influence what Athletic Trainers need to do on a daily basis to be healthy and satisfied with their profession.

Levels of Fitness for Other Health Professionals

Just as there are limited studies that examined Athletic Trainers and their fitness levels, there is also limited research within the other allied health care professions. Physical Therapists are health care professionals who share similar job responsibilities with Athletic Trainers. A major difference in the two professions is that Physical Therapists traditionally work in a clinic or office and have set hours and a predictable schedule from day to day. Although their job focus and population they treat may not be exactly the same as Athletic Trainers their knowledge about the importance of physical activity should still be present.

Chevan and Haskvitz looked at exercise habits and leisure time physical activities of Physical Therapists, Physical Therapist Assistants and student Physical Therapists and compared them with the general public.¹⁵ They hypothesized that because these individuals generally are instructing their patients to be physically active then they are more likely to be physically active themselves. Utilizing an online survey, their results found that Physical Therapists, Physical Therapy Assistants and Physical Therapy students appear to have higher rates of

physical activity than both the general public as well as other allied healthcare professionals.¹⁵ It was also found that the amount of adults that meet these criteria diminishes with age. They concluded that it is possible that individuals who work in the Physical Therapy field are more inclined to be active and appear to be good role models for their patients. Glazer-Waldman et al. utilized a survey about health behaviors and beliefs on Physical Therapists in Texas and found that overall the Physical Therapists have good health habits. They were found to have lower drinking and smoking habits than the general population as well as higher levels of overall activity.¹⁶ The study by Glazer-Waldman et al. was the only research that could be found on Physical Therapists and their physical activity levels.

Another profession of which physical fitness habits have been assessed is nursing. Nursing does not share as many job responsibilities with Athletic Trainers but still work in the healthcare field. Nurses may not work a traditional 40 hour work week but usually have some consistency and control over their schedule. Research on the nursing profession seemed to focus primarily on what factors were important in promoting physical activity among their patients and if there was a correlation between

amount of personal fitness habits and promotion of physical activity with patients.^{17,18} As mentioned earlier a study by Gauerke found a correlation between exercise amount and stress levels in registered nursing.⁸

Irazusta et al looked at the fitness and dietary habits of first year female Nursing students and found that physical activity level in first year Nursing students was lower than that of other first year students at the same University.¹⁹ The authors also found the level of first year Nursing students to be sedentary was higher than other first year students at that University as well. After an exhausting search these were the only relevant studies on Nursing and fitness levels that were found. It is important to remember that research performed on students should not be generalized to the population of that profession.

Clearly more research needs to be done on allied health care professionals and further assess their personal fitness levels and determine if they are adequate role models for their patients.

Quality of Life and Job Satisfaction of Athletic Trainers

It is important in any job setting to evaluate worker's job satisfaction and the field of Athletic

Training is no different. Job satisfaction can be thought of as having a sense of pride and accomplishment in one's job and enjoying one's day to day task.²⁰ Kaiser mentioned in his research that Athletic Training can be a rewarding and satisfying field but that Athletic Trainers may need to work hard at balancing personal and professional life to find that satisfaction.²⁰ It is possible for one's job satisfaction or dissatisfaction to influence quality of life because of the large part a job plays in their life.

Several studies have examined Athletic Trainer's job satisfaction and quality of life because of the stresses the job can place upon one's life. Pitney looked at quality of life of NCAA Division I Athletic Trainers. After a series of in-depth one-on-one interviews the participants said that their jobs were influenced by "bureaucratic tendencies" and that this could be causing quality of life to diminish for Athletic Trainers.²¹ Common problems in the workplace were high volumes of work and low administrative support which would also lead to lower quality of life and potentially burnout. It was concluded that the field of Athletic Training was rewarding yet challenging due to the structure of the job and the constant demands of balancing personal and professional life.

In an article by Mazerolle and Bruening they mentioned that the pressing factors for Athletic Trainers that may affect their quality of life were time, locus of control (their control over events), and staffing patterns.²² They felt that it was important to continue research for proposed solutions to these problems to help improve quality of life for Athletic Trainers. Milazzo et al looked at these factors in their study on Division I-A Athletic Trainers.²³ They also aimed to find a relationship between bidirectional work-family conflict, job satisfaction, and its link to burnout and aptness to leave a job.²³ They utilized their own survey and had 558 returned which they determines was around 60% of all Division I-A Athletic Trainers. They found that there was a significant negative relationship between work-family conflict and job satisfaction and that long working hours, traveling, job burnout and satisfaction were the largest contributors to work-family conflict. They also found a positive relationship between work-family conflict and job burnout. They determined that these individuals working in the Division I-A collegiate setting were having difficulties balancing their professional and private lives due to the conditions of their job. They also felt that work-family

conflict was the leading cause to burnout and possible job attrition.²³

Greco and Powell also looked at job satisfaction, but this time for Athletic Trainers working in the High School setting. They looked at the causes of intrinsic satisfaction, extrinsic satisfaction, and general satisfaction using the Minnesota Satisfaction Questionnaire.²⁴ 903 surveys were returned and from that sample there was no significant difference in satisfaction between individuals with bachelors and masters degrees, between males and females and between curriculum education and internship education. There were significant differences in intrinsic satisfaction but not extrinsic satisfaction for those in different salary groups, those who had written job descriptions, those who had written policies and procedures, and those who had final decisions for athlete's return to play. It was concluded that High School Athletic Trainers who had the highest job satisfaction were those individuals with the highest pay, a written job description, a policies and procedures manual, and those who made final decisions on return to play.²⁴

It is clear from the previous research that in general Athletic Trainers are challenged to balance their personal and professional lives. Because of this they may be at a

higher risk for work-family conflict, job attrition, or burnout.²⁰⁻²⁵ If individuals are at risk for these problems then other aspects of their lives may suffer as well such as physical fitness participation and personal health habits.

Summary

Previous research has shown that there is a clear discrepancy in studies regarding Athletic Trainers and the amount of physical fitness they have time to complete or choose to complete.¹¹⁻¹⁴ What is known is the importance of physical fitness for the overall well being of all individuals.^{5-7,10} Countless benefits can come from even small levels of physical activity each day including health, psychological, mental, and overall well being.⁵

As health providers it would be assumed that Athletic Trainers and other allied health care professionals would act as role models but with such an inconsistent work schedule this may not always be possible.²⁰ Athletic Training can be a stressful and intensive profession which places a burden on individuals in an attempt to balance out personal and professional lives. This puts Athletic Trainers at serious risk for higher levels of burnout and

job attrition.² Higher levels of burnout can then lead to lowered job satisfaction and potentially lower quality of life due to one's job being such a large portion of their life.²¹⁻²⁴

It is clear that there is a relationship between higher physical activity and lowered stress levels, thus making for a potential link between physical activity levels and job satisfaction.^{8,9} If a link is discovered, Athletic Trainers can make attempts to change their physical fitness regiment in order to raise job satisfaction and hopefully improve one's quality of life.

APPENDIX B

The Problem

THE PROBLEM

Statement of Problem

Athletic Training is a profession in which hours may vary greatly from day to day and a constant routine may be difficult to obtain. In this struggle for normalcy, physical fitness activities may be forgotten or not completed as much as one desires. Athletic Trainers have been shown to suffer from higher levels of burnout, stress, and job attrition.¹⁹⁻²² It is a known fact that physical fitness on a regular basis can reduce stress levels and be of large benefits to the health of the participant.⁵⁻⁷

The purpose of the study was to examine the possible correlation between physical fitness scores and job satisfaction for Athletic Trainers. It is important to examine this relationship because if a correlation exists it will show the necessity for Athletic Trainers to make physical fitness a part of their daily regimen. Additionally it is beneficial to look into the physical fitness habits of Athletic Trainers in a variety of settings and see if there are significant differences between them.

Definition of Terms

The following definitions of terms will be defined for this study:

- 1) Physical Fitness - bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure.⁵
- 2) NATA - National Athletic Trainers' Association, the professional membership association for certified Athletic Trainers
- 4) Job Satisfaction- the extent that one is fulfilled and content with their occupation.²¹⁻²³
- 5) Quality of Life- an individual's perception of their personal well-being as influenced by their culture and surrounds.^{19,20}
- 6) Burnout- reaction to chronic stress that causes a state of physical and emotional depletion.²⁴

Basic Assumptions

The following are basic assumptions of this study:

- 1) All survey questions were answered honestly and to the best of the individual's ability.

- 2) The survey sent to these individuals is valid and reliable.
- 3) All individuals participating are in good and regular standing with the NATA.

Limitations of the Study

The following are possible limitations of the study:

- 1) The sample of this study may not be an accurate generalization to the entire population of Athletic Trainers.
- 2) A large enough portion of sampling may not be received to collect accurate data due to refusal to participate.

Significance of the Study

As an allied healthcare professional, Athletic Trainers typically work with a population where health and physical fitness are important and can be vital for individuals to meet their goals. While working with these individuals it might be assumed that advice being given to athletes and patients is well-known and practiced by the Athletic Trainer themselves. Unfortunately due to the nature of the job Athletic Trainers may have a schedule that changes daily which makes a routine hard to follow.

When balancing work, family, friends, and other commitments, Athletic Trainers may find that exercising is impossible to do consistently or at all. Past research has shown that the stress of an Athletic Trainers job can be heavy and is not always without consequence. If one is stressed or unhappy then job satisfaction will ultimately suffer.

There has not yet been a study that specifically looks for a correlation between physical fitness and job satisfaction for Athletic Trainers. If a direct correlation is found between physical fitness and jobs satisfaction scores for Athletic Trainers the implications can be important for the field. If it is found that a few hours a week set aside to perform physical fitness could raise individual's job satisfaction then the entire field of Athletic Training could benefit from more positive and motivated individuals at work. Athletic Trainers may be inspired to find the time for physical fitness and become more satisfied with their job and better able to thrive in the work place.

APPENDIX C
Additional Methods

APPENDIX C1

Institutional Review Board -
California University of Pennsylvania

Project Director's Certification
Program Involving HUMAN SUBJECTS

The proposed investigation involves the use of human subjects and I am submitting the complete application form and project description to the Institutional Review Board for Research Involving Human Subjects.

I understand that Institutional Review Board (IRB) approval is required before beginning any research and/or data collection involving human subjects. If the Board grants approval of this application, I agree to:

1. Abide by any conditions or changes in the project required by the Board.
2. Report to the Board any change in the research plan that affects the method of using human subjects before such change is instituted.
3. Report to the Board any problems that arise in connection with the use of human subjects.
4. Seek advice of the Board whenever I believe such advice is necessary or would be helpful.
5. Secure the informed, written consent of all human subjects participating in the project.
6. Cooperate with the Board in its effort to provide a continuing review after investigations have been initiated.

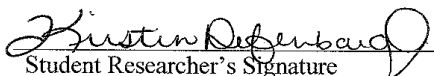
I have reviewed the Federal and State regulations concerning the use of human subjects in research and training programs and the guidelines. I agree to abide by the regulations and guidelines aforementioned and will adhere to policies and procedures described in my application. I understand that changes to the research must be approved by the IRB before they are implemented.


Professional Research

Project Director's Signature

Department Chairperson's Signature

Student or Class Research


Student Researcher's Signature


Supervising Faculty Member's
Signature if required


Department Chairperson's Signature

ACTION OF REVIEW BOARD (IRB use only)

The Institutional Review Board for Research Involving Human Subjects has reviewed this application to ascertain whether or not the proposed project:

1. provides adequate safeguards of the rights and welfare of human subjects involved in the investigations;
2. uses appropriate methods to obtain informed, written consent;
3. indicates that the potential benefits of the investigation substantially outweigh the risk involved.
4. provides adequate debriefing of human participants.
5. provides adequate follow-up services to participants who may have incurred physical, mental, or emotional harm.

Approved [_____]

Disapproved

Chairperson, Institutional Review Board

Date

Approved, September 12, 2005 / (updated 02-09-09)

Wednesday, February 02, 2011 1:15 PM

**Institutional Review Board
California University of Pennsylvania
Psychology Department LRC, Room 310
250 University Avenue
California, PA 15419
instreviewboard@cup.edu
instreviewboard@calu.edu
Robert Skwarecki, Ph.D., CCC-SLP, Chair**

Ms. Defenbaugh,

Please consider this email as official notification that your proposal titled "Correlation between Physical Activity and Job Satisfaction among Athletic Trainers" (Proposal #10-025) has been approved by the California University of Pennsylvania Institutional Review Board as amended. The effective date of the approval is 02-02-2011 and the expiration date is 02-01-2012. These dates must appear on the consent form.

Please note that Federal Policy requires that you notify the IRB promptly regarding any of the following:

- (1) Any additions or changes in procedures you might wish for your study (additions or changes must be approved by the IRB before they are implemented)**
- (2) Any events that affect the safety or well-being of subjects**
- (3) Any modifications of your study or other responses that are necessitated by any events reported in (2).**
- (4) To continue your research beyond the approval expiration date of 02-01-2012 you must file additional information to be considered for continuing review. Please contact instreviewboard@calu.edu**
Please notify the Board when data collection is complete.

Regards,

**Robert Skwarecki, Ph.D., CCC-SLP
Chair, Institutional Review Board**

APPENDIX C2

Survey Cover Letter



California University of Pennsylvania

Dear Fellow Certified Athletic Trainer:

My name is Kristin Defenbaugh and I am a master's degree candidate at California University of Pennsylvania, requesting your help to complete part of my degree requirements. Please follow the link at the end of this letter to an online survey titled: Correlation between Physical Activity and Job Satisfaction among Athletic Trainers.

The questionnaire will take about twenty minutes to complete.

One thousand randomly selected certified NATA members with a listed email address are being asked to submit this questionnaire, but you have the right to choose not to participate. The California University of Pennsylvania Institutional Review Board has approved this study for the Protection of Human Subjects.

This is a completely anonymous questionnaire and upon submission, neither your name nor email address will be attached to your answers. Your information will be kept strictly confidential.

As a fellow certified athletic trainer, your knowledge and opinions regarding this topic makes your input invaluable. Please take a few minutes to fill out the anonymous questionnaire you will find by clicking on this link and submit at your earliest convenience.

<http://www.surveymonkey.com/s/ThePhysicalActivityandJobSatisfactionQuestionnaireforAthleticTrainers>

Thank you for your time and consideration.

Sincerely,

Kristin Defenbaugh, ATC
California University of Pennsylvania
250 University Ave
California, PA 15419
DEF7150@calu.edu

APPENDIX C3

The Physical Activity and Job Satisfaction Questionnaire
for Athletic Trainers.

The Physical Activity and Job Satisfaction Questionnaire for Athletic

1.

12/2010

Dear Fellow Certified Athletic Trainer:

My name is Kristin Defenbaugh and I am currently a graduate student at California University of Pennsylvania pursuing a Master of Science in Athletic Training. Part of the graduate study curriculum is to complete a research thesis. I am conducting survey research to determine if there is a correlation between physical activity levels and job satisfaction for Athletic Trainers.

Participation is voluntary and you do have the right to choose not to participate. You also have the right to discontinue participation at any time during the survey completion process at which time your data will be discarded. The California University of Pennsylvania Institutional Review Board has reviewed and approved this project. The approval is effective nn/nn/nn and expires mm/mm/mm .

All survey responses are anonymous and will be kept confidential, and informed consent to use the data collected will be assumed upon return of the survey. Aggregate survey responses will be housed in a password protected file on the CalU campus. Minimal risk is posed by participating as a subject in this study. I ask that you please take this survey at your earliest convenience as it will take approximately 20 minutes to complete. If you have any questions regarding this project, please feel free to contact the primary researcher, Kristin Defenbaugh, DEF7150@calu.edu, 815-985-6421. You can also contact the faculty advisor for this research, Shelly DiCesaro, PhD, ATC, CSCS, dicesaro@calu.edu, 724-938-5831. Thanks in advance for your participation. Please click the following link to access the survey (INSERT LINK HERE).

Thank you for taking the time to take part in my thesis research. I greatly appreciate your time and effort put into this task.

Sincerely,

Kristin Defenbaugh, ATC
Primary Researcher
California University of Pennsylvania
250 University Ave
California, PA 15419
(815) 985-6421
DEF7150@calu.edu

The Physical Activity and Job Satisfaction Questionnaire for Athletic

2. Demographics

Please select the correct response

1. What is your gender?

- 1) Female
 2) Male

2. What is your age?

3. What NATA District do you currently work in?

- District I
 District II
 District III
 District IV
 District V
 District VI
 District VII
 District VIII
 District IX
 District X

4. How many years of experience do you have as a BOC certified Athletic Trainer?

5. What is your highest degree earned?

- Bachelor's
 Master's
 Doctorate

The Physical Activity and Job Satisfaction Questionnaire for Athletic**6. What is your job title?**

- Head Athletic Trainer
- Assistant Athletic Trainer
- Program Director
- Professor
- Graduate Assistant
- Other (please specify)

7. What is your current/primary employment setting?

- Clinic
- Clinic/High School
- College/University
- High School
- Hospital/High School
- Industrial
- Military/Government
- Performing Arts
- Professional Athletics
- Sports Club/Youth Sports
- Other (please specify)

The Physical Activity and Job Satisfaction Questionnaire for Athletic

3. Baecke Questionnaire of Habitual Physical Activity

1. Please choose the appropriate answer

	Never	Seldom	Sometimes	Often	Always
At work I sit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work I stand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work I walk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work I lift heavy loads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After working I am tired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work I sweat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Please choose appropriate answer

	Much heavier	Heavier	As heavy	Lighter	Much lighter
In comparison with others my own age I think my work is physically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Do you play sports?

If yes; please answer additional questions below. If no, continue on to question 10

- Yes
 No

4. Which level sport do you play most frequently?

- Low Level (average energy expenditure 0.76 MJ/h) such as billiards, sailing, bowling, and golf
 Middle Level (average energy expenditure 1.26 MJ/h) such as badminton, cycling, dancing, swimming, and tennis
 High Level (average energy expenditure 1.76 MJ/h) such as boxing, basketball, football, rugby, and rowing

5. How many hours a week do you participate in this sport?

- 1 hr
 1-2 hrs
 2-3 hrs
 3-4 hrs
 4 hrs<

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6. How many months a year?

- 1 month
 1-3 months
 4-6 months
 7-9 months
 9 months<

7. If you play a second sport; please identify the level

- Low level (average energy expenditure 0.76 MJ/h) such as billiards, sailing, bowling and golf
 Middle level (average energy expenditure 1.26 MJ/h) such as badminton, cycling, dancing, swimming and tennis
 High level (average energy expenditure 1.76 MJ/h) such as boxing, basketball, football, rugby and rowing

8. How many hours a week?

- 1 hr
 1-2 hrs
 2-3 hrs
 3-4 hrs
 4 hrs<

9. How many months a year?

- 1 month
 1-3 months
 4-6 months
 7-9 months
 9 months<

10. Please choose appropriate answer

	Much more	More	The same	Less	Much less
In comparison with others of my own age I think my physical activity during leisure time is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The Physical Activity and Job Satisfaction Questionnaire for Athletic**11. Please choose appropriate answer**

	Very often	Often	Sometimes	Seldom	Never
During leisure time I sweat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During leisure time I play sport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During leisure time I watch television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During leisure time I walk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During leisure time I cycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Please choose appropriate answer

	<5 minutes	5-15 minutes	15-30 minutes	30-45 minutes	45< minutes
How many minutes do you walk and/or cycle per day to and from work, school, and shopping?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Do you have access to a gym or health program at your place of work?

- Yes
- No

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5. Thank you

Thank you for completing this survey and contributing to Athletic Training research. If you have any questions feel free to contact the primary researcher Kristin Defenbaugh at DEF7150@calu.edu

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ABSTRACT

TITLE: CORRELATION BETWEEN PHYSICAL ACTIVITY AND JOB SATISFACTION AMONG ATHLETIC TRAINERS

RESEARCHER: Kristin Defenbaugh, ATC

ADVISOR: Shelly DiCesaro, PhD, ATC, CSCS

DATE: May 2011

RESEARCH TYPE: Descriptive research design

PURPOSE: The purpose of this study was to measure physical activity levels and job satisfaction scores of certified Athletic Trainers and look for a potential correlation, then compare scores to employment settings and other variables.

METHOD: Two hundred eighty six certified Athletic Trainers who were members of the NATA voluntarily participated in a descriptive type of research study. The Baecke Questionnaire of Habitual Physical Activity invented by Jos Baecke and the Job Satisfaction Survey[©] invented by Paul E. Spector were used. The data was analyzed by a Pearson Product Moment Correlation and a factorial MANOVA. Significance was set at alpha level .05.

FINDINGS: There was an insignificant weak positive correlation between physical fitness scores and job satisfaction scores. There was no significant difference between job settings for fitness and job satisfaction scores.

CONCLUSION: Athletic Training is a field that carries a higher burnout rate and lower job satisfaction than other allied healthcare professions. It is imperative that individuals in this field find time in their schedule to care for themselves and their health. Further research needs to look into other variables that may be causing high burnout and low job satisfaction.