A THESIS
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By
Joshua Daniel Allen

Research Adviser, Dr. William Biddington
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CALIFORNIA UNIVERSITY OF PENNSYLVANIA
CALIFORNIA, PA

THESIS APPROVAL

Graduate Athletic Training Education

We hereby approve the Thesis of

Joshua D. Allen
Candidate for the degree of Master of Science

Date       Faculty

4/24/06     Dr. William Biddington

4/30/06     Dr. Chris Harman

4/27/06     Dr. John L. Cramer Roh
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INTRODUCTION

Burnout has been defined as a state of mental or emotional, and physical exhaustion brought on by persistent devotion to a goal, the achievement of which is dramatically opposed to reality. Although burnout is a common expression, it is only recently that the topic has been studied scientifically in athletics. The amount of pressure put on collegiate athletes to perform at the highest level possible is a growing problem. This increase in training is pushing many athletes towards burnout. Athlete burnout is defined as the psychological, emotional, and sometimes physical withdrawal from a sporting activity formerly perceived as enjoyable as a consequence of chronic stress. Burnout is causing many athletes to stop participating in their sport. Because this is developing into a larger problem in the area of sports, athletic trainers must become more aware of the possible signs and symptoms and also be able to help prevent burnout or refer an athlete if it does occur.

There are different variables that have been revealed that can lead to burnout. A study by Vlahos found that the athletes’ personality traits, experience of competitive stress, level of confidence in athletic abilities, and
perceptions of social support can lead to burnout. Additional studies also found severe practice conditions, extreme physical fatigue, lack of recovery from competitive stress, boredom, and emotional exhaustion to be factors that lead to burnout.5

Studies are also being completed on gender, age, time spent practicing, duration of season, comparison of team and individual sports, personality hardiness, stress, coaching behavior and how it affects burnout, lack of time with others, personal failure, social problems and its relationship with burnout. Early studies found that females were at a greater risk of burnout than males. However, two recent studies have found that there was no significance between gender for burnout1,6. It has been suggested that athletes involved in individual sports may be more prone to experience burnout than athletes participating in team sports. Athletes participating in individual sports often begin at a very young age. This is seen in sports such as tennis, figure skating, swimming, and gymnastics. At the age of 15, an athlete could have been competing for a decade in their sport. Some believe that youth are not ready for this kind of intense training and competition.1
One of the most commonly agreed upon reasons for burnout is stress, both acute and chronic. This was shown in a study that was conducted by Flor. Flor used 181 NCAA Division I athletes which participated in a variety of sports such as softball, track, baseball, and tennis representing 10 teams from three different Midwestern conferences. Burnout levels were measured using a sports adaptation of the Maslach Burnout Inventory (MBI) and stress was found to be significantly correlated with burnout. Stress was also related to increases in levels of emotional exhaustion, depersonalization, and reduced levels of personal accomplishment, all of which are a part of burnout.

Raedeke and Smith found similar findings. The study involved 244 senior level swimmers recruited from USA Swimming affiliated clubs from five states. In this report, results showed that there was a positive relationship between perceived stress and burnout. The subjects reporting higher levels of stress also experienced more exhaustion, valued swimming less, and believed they were accomplishing less than other swimmers.

Burnout can be seen in other areas of sports as well. Coaches, officials and umpires, and athletic trainers are experiencing burnout and its symptoms. The most examined
of the three is coaching. Coaching has long been considered a stressful occupation with numerous identified stressors such as self-imposed and external pressure to win, time demands that are viewed as overwhelming, role conflicts, inequalities between mens and womens programs, and a general lack of administrative understanding and support.\textsuperscript{8} Burnout in other professions related to sport have also found reasons similar to the athletes. For example, differences in coaching issues, perceived stress, and emotional exhaustion were found in coaching between gender\textsuperscript{8}. Specifically, female coaches scored higher on the emotional exhaustion dimension of burnout than male coaches\textsuperscript{9,10}. An interesting suggestion made by Felder was that married women who were coaches might also still have responsibilities at home such as household tasks and taking care of her family\textsuperscript{11}. Additionally, Pastore and Kuga\textsuperscript{9} found that coaches were often underpaid, put in long hours and had a lot of pressure on them.

Officials, umpires, and referees all have similar causes of burnout. Rainey found that the main factors of burnout for soccer officials and baseball umpires were fear of failure, fear of physical harm, time pressure, and interpersonal conflict\textsuperscript{12}. Stressors that can lead to burnout for athletic trainers are the number of hours
worked, a high athlete-to-athletic trainer ratio, and the large number of sports that an athletic trainer is responsible for throughout the school year.$^{13}$

In the following research, the Eades Athletic Burnout Inventory (EABI) was given to measure burnout in college athletes. This inventory was chosen because of its sports related questions and previous research that had also used this inventory. The study attempted to answer the following questions: 1) Is there a relationship between class rank and burnout levels? 2) Is there a difference between gender for burnout? 3) Is there a difference between team or individual sports for burnout?
METHODS

This section will include the following subsections: Research Design, Subjects, Instruments, Procedures, Hypothesis, and Data Analysis.

Research Design

A descriptive design was used for this study. The dependent variable used was burnout scores measured by Eades Athletic Burnout Inventory (EABI). The independent variables were age, gender, and sport.

The number of subjects used, along with the use of many different sports, helped this research to be stronger. The burnout test that was used had also been shown to be reliable. Some areas that could limit this study was the time of season that the test was given, the way the athlete was thinking at the time of the test, and that the test was only administered to Division II athletes.

Subjects

The researcher surveyed male and female NCAA Division II level athletes and from California University of
Pennsylvania and from Alderson-Broaddus College. The sports used from each institution were: 1) Alderson-Broaddus College: baseball, mens soccer, mens and womens basketball, mens and womens cross country, softball, and womens volleyball. 2) California University of Pennsylvania: baseball, mens basketball, mens and womens soccer, and womens volleyball. A sample of convenience was taken. Informed Consent (Appendix C1) was obtained from all athletes that chose to participate. Some limitations that affected this study were the time of the season that the test was given and the mood of the athlete at the time of the test.

Instruments

A demographic survey was attached to the front of the EABI. This survey included age, gender, sport, whether or not they were a redshirt, were they a starter, if they had a job, how many hours did they work, how many hours they practiced in a week, and their education level.

The Eades Athletic Burnout Inventory (EABI) (Appendix C2) was used to determine the athlete’s burnout levels. The EABI is a 36-item self-report inventory that has been designed as a general burnout in sport. A 7-point Likert
scale identified the frequency the subject experienced various feelings and cognitions regarding their sport participation. A minimum score of 0 to a maximum score of 216 on burnout was possible. The EABI was developed through the use of four pilot studies. Its third and final version was administered to 98 male and 85 female NCAA Division I athletes, representing 10 sports. Factor analysis of the item scores produced six factors with 36 items in total. The internal consistency ranged from .57 to .89. The six factors are 1) negative self-concept of athletic ability, 2) emotional and physical exhaustion, 3) psychological withdrawal from and devaluation of sport participation, 4) devaluation by coach and teammates, 5) congruent athlete-coach expectations, and 6) personal and athletic accomplishment. The mean score of athletes who had been identified as withdrawing from their sport due to burnout has been found to be 127.  

Procedures

The researcher applied for Institutional Review Board (Appendix C3) approval at California University of Pennsylvania. The researcher met with the selected sports from both California University of Pennsylvania and
Alderson-Broaddus College and recruited volunteers. The researcher then gave the athletes who chose to participate an Informed Consent Form (Appendix C1) and the EABI, with a demographic sheet (Appendix C3) to complete. The researcher then collected and analyzed the data.

**Hypotheses**

The following hypotheses were based on a review of the literature and the intuition of the researcher.

1. Upperclassmen will have higher burnout scores than underclassmen.
2. Female athletes will have higher burnout scores than male athletes.
3. Individual sport athletes will have higher burnout scores than team athletes.

**Data Analysis**

The level of significance was set at $\alpha \leq .05$ to test the acceptability of the stated hypotheses. A 2 x 2 x 2 factorial ANOVA was used to determine if there was a difference in burnout scores between upperclassmen and underclassmen, males and females, and
between individual sport athletes and team sport athletes. The demographic questionnaire was used to find additional findings.
RESULTS

Demographic Data

The sample consisted of collegiate athletes from California University of Pennsylvania (n = 53) and Alderson-Broaddus College (n = 97). This sample consisted of 150 athletes, 88 male and 62 female. The age range of the athletes within this sample ranged from 18 to 25 years (20.29±1.51). The range of the number of credits the athlete was taking was 1 to 19 hours (15.33±2.30). Also measured was the number of hours the athletes practiced. This ranged from 2 to 25 hours of practice per week (12.88±4.87). Whether the athlete had a job (Table 1) was examined and also the amount of hours they worked per week. The hours they worked ranged from 0 to 40 (5.59±7.87). Nearly half (44.7%) of the subjects had a job during their respected seasons (Table 1). Redshirt status, sport, class rank, whether or not they were a starter, and if they played a team or individual sport were also examined (See Tables 4, 5, and 6).
Table 1. Frequency Table for Job

<table>
<thead>
<tr>
<th>Job</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>67</td>
<td>44.7</td>
</tr>
<tr>
<td>No</td>
<td>83</td>
<td>55.3</td>
</tr>
</tbody>
</table>

A small percentage (14.7%) have received redshirt status (Table 2).

Table 2. Frequency Table for Redshirt Status

<table>
<thead>
<tr>
<th>Redshirt Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>22</td>
<td>14.7</td>
</tr>
<tr>
<td>No</td>
<td>128</td>
<td>85.3</td>
</tr>
</tbody>
</table>

The frequency of sport varied from 30 subjects from mens soccer and baseball to 8 subjects that participated in womens basketball (Table 3).

Table 3. Frequency Table for Sport

<table>
<thead>
<tr>
<th>Sport</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mens Soccer</td>
<td>30</td>
<td>20.0</td>
</tr>
<tr>
<td>Womens Basketball</td>
<td>8</td>
<td>5.3</td>
</tr>
<tr>
<td>Womens Volleyball</td>
<td>21</td>
<td>14.0</td>
</tr>
<tr>
<td>Mens Cross Country</td>
<td>9</td>
<td>6.0</td>
</tr>
<tr>
<td>Softball</td>
<td>12</td>
<td>8.0</td>
</tr>
<tr>
<td>Baseball</td>
<td>30</td>
<td>20.0</td>
</tr>
<tr>
<td>Mens Basketball</td>
<td>19</td>
<td>12.7</td>
</tr>
<tr>
<td>Womens Soccer</td>
<td>12</td>
<td>8.0</td>
</tr>
<tr>
<td>Womens Cross Country</td>
<td>9</td>
<td>6.0</td>
</tr>
</tbody>
</table>

The amount of subjects used for class rank was nearly equal with upperclassmen having 77 and underclassmen having 73 (Table 4).
Over half (60.7%) of the subjects used were starters during the season (Table 5).

A very small percentage (12.0%) of the subjects used for the burnout inventory were athletes who participated in individual sports (Table 6).
Hypothesis Testing

The level of significance for testing all hypotheses was set at an alpha level of .05.

Hypothesis 1: Upperclassmen will have higher burnout scores than underclassmen.

A 2 (Gender) x 2 (Class Rank) x 2 (Team or Individual Sport) between subjects factorial ANOVA was calculated to determine if there was a significant difference between class rank.

Conclusion: A 2 x 2 x 2 between subjects factorial ANOVA was calculated comparing the total burnout score for class rank. The main effect for class rank was not significant ($F_{(1,142)} = .97, P > .05$), indicating that class rank does not significantly affect an athlete’s burnout score.

Hypothesis 2: Female athletes will have higher burnout scores than male athletes.

A 2 (Gender) x 2 (Class Rank) x 2 (Team or Individual Sport) between subjects factorial ANOVA was calculated to determine if there was a significant difference between gender.

Conclusion: A 2 x 2 x 2 between subjects factorial ANOVA was calculated comparing the total burnout score for
gender. A significant main effect for gender was found 
\( F(1,142) = 4.12, P < .05 \). Female athletes had higher 
burnout scores (81.58±4.37) than male athletes 
(68.91±4.46).

Hypothesis 3: Individual sport athletes will have 
higher burnout scores than team athletes.

A 2 (Gender) x 2 (Class Rank) x 2 (Team or Individual 
Sport) between subjects factorial ANOVA was calculated to 
determine if there was a significant difference between 
individual and team athletes.

Conclusion: A 2 x 2 x 2 between subjects factorial 
ANOVA was calculated comparing the total burnout score for 
team or individual sport. A significant main effect for 
team versus individual was found \( F(1,142) = 3.95, P < .05 \).
Team sports had higher burnout scores (81.48±2.15) than 
individual sports (69.04±5.86), indicating that athletes 
participating in a team sport are more likely to experience 
burnout than those competing in individual events.
Table 7. A 2 (Gender) x 2 (Class Rank) x 2 (Team or Individual Sport) Factorial ANOVA for Burnout Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>560.405</td>
<td>1</td>
<td>560.405</td>
<td>.968</td>
<td>.327</td>
</tr>
<tr>
<td>Gender</td>
<td>2384.816</td>
<td>1</td>
<td>238.816</td>
<td>4.118</td>
<td>.044</td>
</tr>
<tr>
<td>Team vs. Individual</td>
<td>2285.388</td>
<td>1</td>
<td>2285.388</td>
<td>3.946</td>
<td>.049</td>
</tr>
<tr>
<td>Rank x Gender</td>
<td>1.801</td>
<td>1</td>
<td>1.801</td>
<td>.003</td>
<td>.956</td>
</tr>
<tr>
<td>Rank x Team vs. Individual</td>
<td>292.770</td>
<td>1</td>
<td>292.770</td>
<td>.506</td>
<td>.478</td>
</tr>
<tr>
<td>Gender x Team vs. Individual</td>
<td>157.427</td>
<td>1</td>
<td>157.427</td>
<td>.272</td>
<td>.603</td>
</tr>
<tr>
<td>Rank x Gender x Team vs. Individual</td>
<td>207.172</td>
<td>1</td>
<td>207.172</td>
<td>.358</td>
<td>.551</td>
</tr>
<tr>
<td>Error</td>
<td>82236.506</td>
<td>142</td>
<td>579.130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Findings

Several tests were conducted using the demographic part of the questionnaire along with the total score of the EABI. Multiple analyses were conducted to compare means between sports.

An independent samples t-test was calculated to determine if the athlete’s redshirt status significantly different. A significant difference was found between the means of the two groups ($t_{(148)} = -2.50$, $P < .05$). The mean of the group that did not redshirt was significantly higher (80.70±25.32) than the mean of the group that did redshirt (66.59±18.68).
Table 8 and table 9 reports the significant differences between the different sports. Mens soccer (63.67±14.43) was found to be significantly different than womens basketball (108.00±34.17), womens volleyball (96.62±27.59), and baseball (86.83±23.26). Womens basketball (108.00±34.17) was significantly different than mens soccer (63.67±14.43), mens cross country (66.78±13.09), mens basketball (67.95±18.52), womens soccer (74.25±19.25), and womens cross country (74.11±14.74). Womens volleyball (96.62±27.59) was significantly different than mens soccer (63.67±14.43), mens cross country (66.78±13.09), and mens basketball (67.95±18.52). Mens cross country (66.78±13.09) was significantly different than womens basketball (108.00±34.17) and womens volleyball (96.62±27.59).

Softball (78.08±26.46) was not significantly different than any other sport. Baseball (86.83±23.26) was significantly different than mens soccer (63.67±14.43). Mens basketball (67.95±18.52) was significantly different than womens basketball (108.00±34.17) and womens volleyball (96.62±27.59). Womens soccer (74.25±19.25) was significantly different than womens basketball (108.00±34.17). Finally, womens cross country (74.11±14.74)
was significantly different than womens basketball (108.00±34.17).

The tables shows the significant differences between sports (Table 8 and Table 9).

**Table 8. Sport Differences for Burnout**

<table>
<thead>
<tr>
<th>Mens Soccer</th>
<th>Womens Basketball</th>
<th>Mens Basketball</th>
<th>Womens Volleyball</th>
<th>Mens Cross Country</th>
<th>Womens Softball</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓ Womens Basketball</td>
<td>↑ Mens Soccer</td>
<td>↑ Mens Soccer</td>
<td>Basketball</td>
<td>↓ Womens Cross Country</td>
<td>Volleyball</td>
</tr>
<tr>
<td>↑ Mens Cross Country</td>
<td>↑ Mens Basketball</td>
<td>↑ Mens Basketball</td>
<td>Womens Volleyball</td>
<td>Mens Basketball</td>
<td></td>
</tr>
<tr>
<td>↑ Womens Soccer</td>
<td>↑ Mens Basketball</td>
<td>↑ Mens Basketball</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>↑ Womens Cross Country</td>
<td>Basketball</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*↑* Significantly higher than
*↓* Significantly lower than

**Table 9. Sport Differences for Burnout**

<table>
<thead>
<tr>
<th>Baseball</th>
<th>Mens Basketball</th>
<th>Womens Soccer</th>
<th>Mens Cross Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑ Mens Soccer</td>
<td>↓ Womens Basketball</td>
<td>↓ Womens Basketball</td>
<td>Mens Basketball</td>
</tr>
<tr>
<td>↓ Womens Basketball</td>
<td>Basketball</td>
<td>Basketball</td>
<td>Basketball</td>
</tr>
<tr>
<td>↓ Womens Volleyball</td>
<td>Volleyball</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*↑* Significantly higher than
*↓* Significantly lower than
DISCUSSION

The following discussion is divided into three sections: discussion of results, conclusions, and recommendations.

Discussion of Results

This study focused on burnout levels in NCAA Division II collegiate athletes. The researcher examined whether there was a significant difference in burnout mean scores between gender, class rank, and whether or not they were on a team sport or an individual sport. The researcher also evaluated the burnout mean scores among various demographic information such as redshirt status, age, sport, number of credits they were taking at the time of the survey, whether or not they were a starter, if they had a job and how many hours they worked, and how many hours they practiced a week.

The first hypothesis evaluated the difference in total burnout scores between class ranks. The researcher proposed that upperclassmen, juniors and seniors, would have higher burnout scores than underclassmen, freshmen and sophomores, due to the fact that most upperclassmen athletes had participated in their sport longer than the
underclassmen. This statement is also supported by past research, which concludes that the longer the athlete participates in a sport the more likely they are to suffer from burnout.\textsuperscript{1,6,8}

No significant difference was found between the two variables. Burnout scores were not significantly affected by the class rank of the athlete. There were also no significant differences found for the interaction between gender and class rank and team versus individual and class rank.

The 2\textsuperscript{nd} hypothesis evaluated the difference between gender for overall burnout scores. The researcher believed that female athletes would score higher overall on the Eades Athletic Burnout Inventory than male athletes. Based on previous research females would score higher because of outside emotional stress that they would bring to the sport.

The results of this study showed there was a significant difference between gender. The hypothesis was supported showing female athletes scored significantly higher than the male athletes. This too is supported by previous research.\textsuperscript{1,5,6,8,10} Reasons given by other researchers were a lower sense of personal accomplishment and women use social support more than men do.\textsuperscript{1} Athletic
trainers should use this knowledge to better educate athletes and coaches about burnout. Athletes and coaches need to be aware of the different sports and gender that are more susceptible to experience burnout.

The final hypothesis evaluated the difference between the type of sport in which they participated. The researcher believed that athletes who were on individual sports such as swimming, tennis, wrestling, etc., would experience higher burnout than athletes who were on team sports such as basketball, volleyball, etc. This was hypothesized by the researcher and past research because of the lack of teammates to place the blame on, the age at which the athlete started the sport, and each of these sports require an unusually high amount of training which is generally very repetitious in nature.\textsuperscript{1,4}

A significant difference for burnout was found between team and individual sports. The significant difference that was found showed that the athletes who participated on team sports had higher burnout scores than athletes participating in individual sports. The researcher believes that this finding could be due to the low number of individual sport athletes (n = 18). This could also be due to the pressures that are put on the athlete from coaches and other teammates.
These findings along with the previous research show athletes from all types of sports can experience burnout. Again, athletic trainers must be aware of common signs and symptoms or use reliable inventories to monitor all athletes to help prevent burnout.

In addition to hypothesis testing, statistics were also performed on the demographics section of the questionnaire to discover additional findings. First, an athlete’s redshirt status for their burnout score was examined. Significance was found between the two groups. Those athletes who did redshirt had a significantly lower mean score than those who did not redshirt. This shows us that the demands of the coaching staff and pressures from teammates and games can cause an increase in burnout scores. Although this study was limited to NCAA Division II athletes, athletic trainers must use the results to identify what athletes are more prone to have higher burnout scores. Out of the eight athletes that scored above 127 on the burnout inventory, no redshirt athlete was involved.

The next additional finding was differences between all sports for their overall mean scores. A significant difference was found between some of the sports. The
differences between sports can be seen in Table 8 and table 9 on page 18.

This once again shows how athletes from different sports can experience burnout. Because of this uniqueness, athletic trainers, coaches, and all others involved with the athletes must develop ways to monitor athlete’s burnout levels. Past researchers have used a method of measuring athlete’s burnout levels by giving them the burnout inventory five times throughout their season. By doing this one is able to monitor the athlete and see if there are differences between each individual’s scores.

Additional testing determined if there were significant differences between burnout scores for age, number of credits taking, if they were a starter, if they had a job, how many hours they worked, and how many hours they practice a week. No significant differences were found for any of these variables. Although no differences were found in this study past research has shown that amount of practice hours and having a job can increase burnout scores. Possible reasons for the differences of research results could be the use of only NCAA Division II athletes from two schools. Also, only 150 athletes were used in this study. The use of more athletes from all different levels of colleges could reveal different results.
due to the different stressors that come with each level. For example, NCAA Division III athletes do not receive athletic scholarships so they must pay for their own tuition. With NCAA Division I, some athletes can seen on a national level which could also cause more stress.

Although this study is limited, the researcher believes that the information found is enough to show that burnout can be a problem in the college setting. Athletic trainers along with all others that come in contact with these athletes need to be prepared to prevent burnout and to acquire the resources needed to help the athletes if they develop burnout. The researcher believes that knowledge could be the most useful tool in helping prevent burnout.

Conclusions

The overall mean score (78.63±24.912) for the athletes tested along with eight burnout cases shows that there could be a problem with burnout and that this problem needs to be addressed at the college level. This study also demonstrated that the EABI could be a useful tool to monitor an athlete’s level of burnout. Burnout in athletes has also shown to be different in every athlete. This
shows that burnout can be found in different people, sports, age, as well as other demographics.

Recommendations

This study has shown that there are collegiate athletes that are experiencing burnout. Seeing these results, it is recommended that athletic trainers be more aware of the possibility that their athletes could experience burnout in their collegiate career. Using the research on burnout, athletic trainers need to be aware of who possess the highest risk of developing burnout. In this study female athletes, athletes participating in team sports, and athletes who did not redshirt were the ones found to have the highest burnout scores. By using burnout inventories, athletic trainers can monitor the athlete’s level of burnout and then help to prevent the situation. Also, by using the findings of this study, as well as other studies, medical professionals need to develop prevention and treatment plans to help keep our athletes healthy, both physically and mentally.
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APPENDICES
APPENDIX A

Review of the Literature
Review of the Literature

The amount of pressure put on collegiate athletes to perform at the highest level possible is a growing problem. This increase in training is pushing many athletes into what is known as burnout. Burnout has been defined as a state of mental, emotional, and physical exhaustion brought on by persistent devotion to a goal, the achievement of which is dramatically opposed to reality.\textsuperscript{1} Research indicates that burnout exists in the athletic environment and can affect collegiate athlete’s performance.\textsuperscript{1-7} Athletic trainers must learn what causes burnout and ways to help prevent this condition. Discussion on previous studies will be reviewed and categorized as: 1) Causes of Burnout, 2) Burnout in Athletes, and 3) Burnout in Other Areas of Athletics. A summary of the literature will be provided at the end of the literature review.

Causes of Burnout

Burnout among athletes has been defined as the psychological, emotional, and sometimes physical withdrawal from a sporting activity formerly perceived as enjoyable as a consequence of chronic stress.\textsuperscript{1} Burnout has been said to
lead to negative impacts on the athlete’s physical and psychological well-being. It can cause athletes to have negative sports experiences, which in turn can cause athletes to stop participating in their sport.\(^2\)

Burnout is believed to be comprised of emotional and physical exhaustion, a reduced sense of sport-related accomplishment, and sport devaluation.\(^{1,4}\) Other factors associated with burnout include boredom with the sport, extreme physical fatigue, pressure from coaches and parents, unfulfilled personal performance expectations, personality traits, experience of competitive stress, level of confidence in athletic abilities, and perceptions of social support.\(^{1,3-4}\) Athletes’ perception of support from significant adults, such as parents or coaches, and competitive trait anxiety were found to directly affect their experience of burnout.\(^{3,4}\)

Raedeke and Smith\(^2\) measured a total of 244 senior level swimmers to determine whether social support was directly related to level of burnout. Using the Eades Athletic Burnout Inventory they found that social support, along with stress, was a significant predictor of higher athlete burnout.\(^2\)

Vlahos\(^3\) measured athlete’s personality traits such as the level of neuroticism and extraversion as a factor of
burnout. Flor\textsuperscript{5} went a step further in this direction and measured one trait, personality hardiness. This study found that hardiness did matter in burnout levels. High hardiness scores were found to be related to lower stress appraisal and lower burnout scores on the three subscales of the Maslach Burnout Inventory (MBI); exhaustion, depersonalization, and reduced levels of personal accomplishment. Hardiness had a significant inverse relationship with perceived stress, emotional exhaustion, and depersonalization, and a positive correlation between hardiness personal accomplishment.

Through personal interviews with 15 athletes representing a variety of sports, Coakley concludes that burnout is best explained a social problem. He states that burnout among these young athletes is a social phenomenon in which they leave competitive sport because of two factors: 1) a constrained set of life experiences leading to the development of a unidimensional self concept, and 2) power relationships in and around sport that seriously restrict young athletes’ control over their lives.\textsuperscript{6}

In general, common signs and symptoms of burnout include a lack of energy, exhaustion, sleeplessness, depression, tension, irritability, anger, headaches, decreased performance, the internalization of failure,
disillusionment with one’s sport, a loss of confidence, and withdrawal from participation. It has been found that exhaustion is always present whether this is physical or mental. This type of exhaustion has been defined as a loss of concern, energy, interest, and trust. This exhaustion could also cause the individual to begin reacting in a negative way in response to others. For example, the individual has a change in attitude toward what he or she will accomplish. This results in low self-esteem, failure, and depression, which could lead to a decrease in performance as a result. Although these are the most common, each individual will differ in signs and symptoms. It must be noted that burnout experienced by athletes is not a reaction to occasional stress, but to chronic stress, which occurs over a long period of time. Furthermore, stress has been the top predictor for burnout in athletes. Specific to stress, situational factors associated with stress include low levels of success, difficulties with coaches, high competitive demands, time and energy demands, regimentation, and lack of autonomy. Another finding that they reported was that stress is not always from over training. Stress can also be a result from under load, which is when athletes’ daily experiences do not place enough demands on athletes to keep their interest. This
form of stress is said to usually lead to stagnation and boredom, which are symptoms of burnout.

Another cause of burnout could be that athletes participate in sport for entrapment related reasons only. Whether their participation is pushed on them by their parents or whether the athlete thinks they need to participate to fit in with society. Raedeke put 236 swimmers into four subgroups labeled malcontented, enthusiastic, obligated, and indifferent. The swimmers that were in the malcontented group exhibited characteristics of low perceived control and high social constraints and generally had a negative outlook on swimming. These swimmers demonstrated the highest burnout scores. Conversely, swimmers in the enthusiastic cluster perceived swimming the most favorably and experienced the lowest burnout scores. It was also found that obligated swimmers exhibited entrapment characteristics but only moderately high burnout scores. Finally, indifferent swimmers reported average levels of burnout. Similarly, Rotella et al found that athletes who have a strong need to be liked and admired are also considered at high risk for burnout. They tend to over identify with and internalize the hurts of others, and are motivated by social and interpersonal rewards rather than competition itself.
Burnout in Athletics

Burnout in athletics is becoming more prevalent, which has started an influx of studies in this area. Comparison studies have been completed on gender, age, time spent practicing, duration of season, team and individual sports, personality hardiness, stress, coaching behavior, lack of time with others, personal failure, social problems, as well as other areas. Studies have been conducted on athletes competing at various levels including college at all division levels and also on younger athletes.

Although job or occupational burnout has been studied for several years, burnout among the athletic population has recently become a focus to research, which is based on the occupational research findings. Every day athletes who participate in athletics at a higher level are treating their sport like it is their job. Athletes are putting in long hours both at practice and during their off time, many may think that their coach is more like their boss, and scholarship players may believe that since the sport is paying for their education it is their job.

Gender was one area of study that was examined.\textsuperscript{7,10,12} Previous studies, conclude that females scored higher on burnout tests than males.\textsuperscript{4,12} One previous study found that
they had a lower sense of personal accomplishment. Furthermore most females experience higher amounts of stress.\textsuperscript{10} However, other studies\textsuperscript{7,10} found that there was no significant difference between gender for burnout scores. One reason for the lack of significance was because the female response accounted for only 33\% of the total sample.\textsuperscript{7}

Difference in burnout scores between team and individual sport athletes has also been examined. It has been hypothesized that individual sport athletes will score higher due to the fact that they lack a partner or teammate to share the spotlight or blame, training is often more time consuming in relation to competing time, the expectations of parents and coaches, and individual sport athletes often begin their sports at a younger age.\textsuperscript{3,7} One study found that the individual sport athletes had a significantly higher score than the team sport athletes on the Eades Athlete Burnout Inventory (EABI). Although, individual sport athletes scored significantly higher than team sports, there was only half of the number of participants representing individual sports. Furthermore, one athlete scored nearly two times higher than the average score. However, the study did not discuss the results if the single outlier was removed. Stress has been identified by many to be a main contributor to burnout in athletics as
well as in other fields. Flor\textsuperscript{5} used 181 NCAA Division I athletes participating in sports such as softball, track, baseball, and tennis representing 10 teams from three different Midwestern conferences. They ranged in age from 18 to 24, had been participating in their sport for an average of 10 years, and spent an average of 17 hours per week at practice. Their burnout levels were measured using a sports adaptation of the Maslach Burnout Inventory (MBI). Stress was found to be correlated with burnout in this study. The participating athletes who scored higher on the Perceived Stress Scale also had scores on the MBI indicating higher burnout. Specifically, stress was related to increases in levels of emotional exhaustion, depersonalization, and reduced levels of personal accomplishment.\textsuperscript{5} Similarly, Raedeke and Smith\textsuperscript{2} found that there was also a positive relationship between perceived stress and burnout.\textsuperscript{2} The study involved 244 senior level swimmers recruited from USA Swimming affiliated clubs from five states. The athletes involved in this study that reported higher levels of stress also experienced more exhaustion, valued swimming less, and believed that they were accomplishing less than other swimmers.\textsuperscript{2}

Time and length of season can also play a role in burnout and athletics. Athletes put in many hours at
practice, at games, and during the off-season. The study that was completed by Lai and Wiggins\textsuperscript{10} measured burnout using the Burnout Inventory for Athletes (BIA) of NCAA Division I soccer players over the course of their season. The athletes took the BIA five times during their competitive year. They took one in the preseason (time 1), after preseason/start of the season (time 2), after the first month of competition (time 3), after the second month (time 4), and during the post-season (time 5). The study did not show any differences between genders for time but did show significance between the times the BIA was taken. Specifically burnout levels significantly increased over time. Time 1 BIA scores were found to be significantly lower than times 4 and 5; time 2 scores were significantly lower than 3, 4, and 5; and times 3 and 4 were also found to have significantly lower BIA scores than time 5.\textsuperscript{10}

Length of sport involvement and competitiveness are other variables that have been examined. Finch\textsuperscript{7} hypothesized that the longer the athlete had been involved in their sport the higher the score was on the EABI. After running a linear regression, no significance was found between the two. However, a significant difference was found between the athletes that were less competitive and the more competitive athletes.\textsuperscript{7}
Burnout in Other Areas of Athletics

Burnout can be seen in more people than just the athletes in the sports world. It is becoming wide spread in sports today. Coaches, officials, umpires, and athletic trainers are also experiencing burnout and its symptoms. Not only are the symptoms the same between these professions and the athletes, but also the results are similar. Burnout is causing many individuals to leave their job at which they once had a passion.

The first profession and probably the most examined is coaching. Coaching has long been considered a stressful occupation with numerous identified stressors such as self-imposed and external pressure to win, time demands that are viewed as overwhelming, role conflicts, inequalities between mens and womens programs, and a general lack of administrative understanding and support. These stressors validate why coaches are overstressed, at risk of health problems, and developing coaching burnout.¹¹ The prevalent or long-term perceptions of an imbalance between the demands of the coaching situation, such as understanding and motivating athletes, planning practices, and developing budgets, and the resources available to address the
situation can also lead to the development of coaching burnout. Burnout can cause coaches to become emotionally depleted or exhausted. They may also think that they need to distance themselves from their players psychologically. A reduced sense of meaning about their work and personal accomplishment may also be a sign of coaching burnout. All three of these are a part of many of the definitions of burnout.

Very similar to burnout in athletes, hardiness was found to affect coaches. Hardiness was found to positively influence health by changing the occurrences of stressful experiences. In turn, coaches having a high level of hardiness might be expected to be less vulnerable to the development of burnout by reducing the appraisal of negative stress.

One specific study of coaches and burnout included 249 male and female NCAA Division III and NAIA head baseball and softball coaches. Both baseball and softball coaches were selected because of perceived similarities in the responsibilities and pressures within their given professional roles. In this study, gender differences found for coaching issues, perceived stress, and emotional exhaustion were similar to those found in previous studies. Higher appraisal of stress, becoming emotionally depleted,
frustrated, fatigued, and at the end of their rope was associated with female more than male coaches. It is the perception that female coaches may be expected to not only take on additional responsibilities related to coaching but also to take time to be more nurturing of their athletes which may explain this finding.  

Consistent with previous research, the highest degree of burnout was evident with emotional exhaustion in which male and female coaches fell within moderate to high norm classifications at the start and end of the season. There were also inconsistent materials in this study. The majority of coaches were classified as suffering from low burnout for depersonalization and personal accomplishment at the start and end of the season.  

Another study examined the perceived level of burnout in coaches of womens teams in 2-year colleges using the MBI to measure burnout levels. This study states that there has been a decline in the number of females in the coaching profession. Pastore and Judd also state that burnout has been identified as one of the major reasons for females leaving the coaching profession. The subjects of this study were male and female coaches of womens basketball, cross-country, tennis, and volleyball. The overall effect for gender on the emotional exhaustion subscale was the
only significant finding of the three subscales.\textsuperscript{12}
Furthermore, female coaches reported higher levels of emotional exhaustion than male coaches. This could have been caused by the female coaches placing extra stress on themselves to prove that women’s sports were deserving.\textsuperscript{12} A study performed by Drake\textsuperscript{13} also found that female coaches had higher scores on the emotional exhaustion dimension of burnout than male coaches. Drake also reported gender differences, particularly in terms of the teacher-coach inter-role conflict, where female teacher-coaches reported greater conflict. The inter-role conflict is the conflict of handling both roles as a teacher and coach.\textsuperscript{13}

The next study examined high school coaches. One of the first possible reasons given by Pastore and Kuga\textsuperscript{14} was that the coaches were often underpaid and also put in long hours and had a lot of pressure on them. Once again, the findings of this study also found that female coaches scored higher on the emotional exhaustion subscale. Differently from the other studies though, was that female coaches scored higher on all three subscales; personal accomplishment, emotional exhaustion, and depersonalization.\textsuperscript{14}

An interesting suggestion made by Felder\textsuperscript{15} was that married women who are coaches might also have
responsibilities at home such as household tasks and taking care of her family. This is what is referred to as role conflict. This is also true for coaches who have to teach in the school system.

Officials, umpires, and referees all have similar causes of burnout. Rainey\textsuperscript{16} found that the main factors of burnout for soccer officials and baseball umpires were fear of failure, fear of physical harm, time pressure, and interpersonal conflict. Fear of failure deals with performing poorly at a game and interpersonal conflict is referring to conflicts with coaches, players, and fans.\textsuperscript{16} A similar study completed on basketball referees found the same four reasons that cause burnout. All of these reasons along with age were predictors of burnout and intention to terminate their career.\textsuperscript{17}

Athletic trainers have slightly different stressors but are closely related to those of officials and umpires. One area examined is the stress that is caused by the responses that can often occur from intense contact and involvement with others during the course of a work day.\textsuperscript{18} This could be similar to the interpersonal conflict experienced by officials and umpires. Other stressors that can lead to burnout are the number of hours worked, a high athlete to athletic trainer ratio, and the large number of
sports that an athletic trainer is responsible for throughout the school year.\textsuperscript{18}

Summary

Athlete burnout is defined as the psychological, emotional, and sometimes physical withdrawal from a sporting activity formerly perceived as enjoyable as a consequence of chronic stress.\textsuperscript{1} There are many causes that have been shown to lead to burnout. Causes of burnout can range from emotional and physical exhaustion to lack of control over their lives. The important thing to remember is that each individual could differ. Each case of burnout has its own characteristics and also the individual differences may have been found due to the different instruments used.

Burnout in athletes is becoming more prevalent everyday. Burnout in athletes is being found to have differences in age, gender, duration of season, and the amount of stress put on the athlete. There are many studies being conducted on burnout in athletes. These range from personality traits to other demographic factors.

Burnout is happening in more than just the athletes. Burnout in coaches is becoming just as popular as burnout
in athletes. Coaches are showing significant burnout levels in the subscales of burnout. Umpires, officials, referees, and athletic trainers are also beginning to “drop out” of their respective professions.

Causes of burnout, burnout in athletics, and also the burnout that is involved with other areas of athletics show that sport involvement is not always a healthy experience for athletes. Collegiate athletes are involved with burnout from different aspects. Whether they have burnout themselves or whether their coaches or athletic trainers have it. No matter where it is coming from it needs to be addressed. If athletic trainers can become more aware of burnout and its signs and symptoms or monitor it more closely, they can help keep their athletes healthy both physically and mentally.
APPENDIX B

The Problem
**The Problem**

**Statement of the Problem**

Collegiate sports are becoming a very important role in individuals’ lives. Due to the increase in sport participation, a greater demand for dedication to a sport has become prevalent. Collegiate athletes must put in many hard hours to improve in their sport and to keep up with the competition. At the same time, these college athletes must also keep up with their day-to-day college lives. The demand of all these stresses, lead to a problem known as burnout. Among some of the research done on sports burnout is the different perceptions between male and female, the involvement that coaches’ behavior has on burnout, and also the use of different coping strategies.

The purpose of this study was to examine burnout in college athletes. This study examined age, gender, and the burnout differences between team and individual sports.

**Definition of Terms**

The following terms are defined below for better understanding of this study.

1. **Burnout** - A syndrome characterized by emotional exhaustion, depersonalization, and a reduced
Personal accomplishment caused by acute stress.\textsuperscript{19}

2. **Depersonalization** – Isolation of oneself from peers, coaches, and family.\textsuperscript{20}

3. **Eades Athletic Burnout Inventory** – A 36 item questionnaire given to the athletes to determine their level of burnout.

4. **Emotional Exhaustion** – Being emotionally exhausted by the demands of training and competition.\textsuperscript{21}

5. **Maslach Burnout Inventory** – A questionnaire used to determine burnout levels. The inventory is divided into three subscales; emotional exhaustion, depersonalization, and personal accomplishment.\textsuperscript{12}

6. **Personality Hardiness** – Personality hardiness is a personality trait that can help one cope with stressful experiences by changing one’s appraisal of those experiences.\textsuperscript{5}

7. **Reduced Sense of Accomplishment** – Denotes athletes’ sense of personal growth and successful achievement through their sport participation.\textsuperscript{21}

8. **Staleness** – Impaired in efficacy, vigor, or spirit, as from inactivity or boredom. To loose interest in ones sport.
Basic Assumptions

The following are basic assumptions for this study.

1. All athletes will answer all questions honestly and to the best of their knowledge.
2. All athletes were healthy and competed throughout their competitive season.
3. The participants in the study will be able to read and understand all the questions on the burnout inventory.

Limitations of the Study

The following are possible limitations for this study.

1. All athletes will be from a college at the NCAA Division II level.
2. Athletes are answering the burnout survey during the off-season and may have difficulty recalling the events that occurred in the regular season.
3. If all athletes do not choose to participate in the study, the sample size may not be large enough to adequately represent the entire college athletic population.
Significance of the Study

Knowledge and education may help in the prevention of sport burnout. Knowledge of burnout may also assist athletic trainers, as well as other members of the sports medicine team, in recognizing signs and symptoms of burnout in athletes that may face this problem. Athletic Trainers could also ensure that the athlete’s participation is both physically and mentally healthy. The education of athletic trainers of burnout offers the opportunity to recognize certain actions, warning signals, or characteristic traits of sport burnout. Finally, knowledge and education may help to identify the athlete, or particular sport, that is more susceptible to experience burnout.

It would be disappointing, after the many years that college level athletes put into becoming the best performer they can be, to see them leave their activity that they loved so much simply because he or she was not able to cope with the stress that accompanies sports and college life. Once again knowledge and education can help in the prevention of this problem.

Decreasing the occurrence of burnout could have far reaching positive effects. The potential of having sound information on burnout would be a great advancement for athletic training. These possibilities are not beyond
reach and may make a great impact in the sport psychology and physiology worlds.
APPENDIX C

Additional Methods
APPENDIX C1

Informed Consent Form
Informed Consent

1. Joshua Allen, who is a graduate athletic training student, has requested my participation in a research study at California University of Pennsylvania. The title of the research is Burnout and its Effect on Collegiate Athletes.

2. I have been informed that the purpose of the research is to examine burnout within college athletes. This study will examine age, gender, and sport.

3. My participation will involve completing a demographic survey along with a burnout survey.

4. There are no foreseeable risks or discomforts by participating in this study.

5. There are no feasible alternative procedures available for this study.

6. I understand that the possible benefits of my participation in the research are that the athletic trainer can better identify, prevent, and help with the well being of the athletes suffering from burnout.

7. I understand that the results of the research study may be published but that my name or identity will not be revealed. In order to maintain confidentiality of my records, the researcher will maintain all documents in a secure location in which only he and his research advisor can access. The survey will be completely anonymous and codes will be used only during data analysis.

8. I have been informed that I will not be compensated for my participation.

9. I have been informed that any questions I have concerning the research study or my participation in it, before or after my consent, will be answered by Joshua Allen, 234 Second St. Apartment E, California, Pennsylvania 15419, (724) 317-8592, and
10. I understand that written responses may be used in quotations for publication but my identity will remain anonymous.

11. I have read the above information. The nature, demands, risks, and benefits of the project have been explained to me. I knowingly assume the risks involved, and understand that I may withdraw my consent and discontinue participation at any time without penalty or loss of benefit to myself. In signing this consent form, I am not waiving any legal claims, rights, or remedies. A copy of this consent form will be given to me upon my request.

Subject’s name_________________________Date________________

Other signature (if appropriate)____________________Date______

12. I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associated with participation in this research study, have answered any questions that have been raised, and have witnessed the above signature.

13. I have provided the subject/participant a copy of this signed consent document upon their request.

Signature of investigator____________________Date______

Approved by the California University of Pennsylvania Institutional Review Board
APPENDIX C2

Eades Athletic Burnout Inventory (EABI)
EABI Inventory

The Sport Participation Survey
Below are 36 statements reflecting feelings and thoughts you may have had about your sport participation. Please read each statement carefully and decide if you have ever felt or thought this way. Include all activities (e.g., off-season training and competitive season activities). It is important to indicate how often you have felt this way. Please answer all questions.

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1. I just want the season to be over.
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2. I feel tense about my practices.
   0 1 2 3 4 5 6

3. I feel overwhelmed by the demands of my sport participation.
   0 1 2 3 4 5 6

4. I feel so tired from my training that I have trouble studying/working.
   0 1 2 3 4 5 6

5. I feel successful in my sport endeavors.
   0 1 2 3 4 5 6

6. I know exactly what is expected of me by my coach.
   0 1 2 3 4 5 6

7. I feel my teammates/peers blamed me for some of their mistakes.
   0 1 2 3 4 5 6

8. My sport participation significantly enhances my self image.
   0 1 2 3 4 5 6

9. My sport performances are really going downhill.
   0 1 2 3 4 5 6
10. I don’t feel confident about my sport ability.
    0 1 2 3 4 5 6

11. The effort I spend participating in my sport would be better spent trying to achieve more important goals.
    0 1 2 3 4 5 6

12. I feel like my coach only cares about me as an athlete and not as a complete person.
    0 1 2 3 4 5 6

13. I feel frustrated about my sport participation.
    0 1 2 3 4 5 6

14. I feel my coach treated me like an impersonal object.
    0 1 2 3 4 5 6

15. I feel satisfied with my sporting accomplishments.
    0 1 2 3 4 5 6

16. I just can’t do it anymore.
    0 1 2 3 4 5 6

17. I feel emotionally drained from my sport participation.
    0 1 2 3 4 5 6

18. I feel my teammates/peers only care about me as an athlete and not as a complete person.
    0 1 2 3 4 5 6

19. I don’t know if my performance is acceptable to my coach.
    0 1 2 3 4 5 6

20. I do perform up to my ability in my sport.
    0 1 2 3 4 5 6

21. I feel tired when I think about having to go to practice.
    0 1 2 3 4 5 6

22. I feel certain about how my coach evaluates my performance.
    0 1 2 3 4 5 6
23. I feel my peers don’t really care how I do in my sport.
   0 1 2 3 4 5 6

24. I don’t have enough time to complete my sport and outside activities.
   0 1 2 3 4 5 6

25. I have doubts about my ability in my sport.
   0 1 2 3 4 5 6

26. I feel like a failure in my sport.
   0 1 2 3 4 5 6

27. I feel my sport participation positively influences my life.
   0 1 2 3 4 5 6

28. I feel physically worn out from my sport participation.
   0 1 2 3 4 5 6

29. I feel very energetic at practice.
   0 1 2 3 4 5 6

30. I want to quit my sport.
   0 1 2 3 4 5 6

31. I agree with what my coach wants me to do in my sport.
   0 1 2 3 4 5 6

32. I feel depressed about my sport participation.
   0 1 2 3 4 5 6

33. I feel overly tired from my training.
   0 1 2 3 4 5 6

34. I feel exhilarated after training.
   0 1 2 3 4 5 6

35. It is hard to find the effort to complete my sport and outside responsibilities.
   0 1 2 3 4 5 6

36. I feel embarrassed about my performance.
   0 1 2 3 4 5 6

Approved by the California University of Pennsylvania Institutional Review Board
Demographic Questionnaire

Gender: Male   Female

Year of Education: Freshman   Sophomore   Junior   Senior

Age:____

Sport:___________________

Years of sport participation:____

Did you redshirt for any reason:  Y / N

Number of credits you are taking this semester:____

Are you a starter:  Y / N

How many hours do you practice a week:____

Do you have a job:  Y / N

If yes, how many hours do you work a week:____
APPENDIX C3

IRB Human Subjects Form
# Protocol for Research Involving Human Subjects

Institutional Review Board (IRB) approval is required before beginning any research and/or data collection involving human subjects

(Reference IRB Policies and Procedures for clarification)

**Project Title:** Burnout and its Effects on Collegiate Athletes

**Researcher/Project Director:** Joshua Allen

**Phone #:** 724-317-8992  **E-mail Address:** all25290@cup.edu

**Faculty Sponsor (if required):** Dr. William Riddington

**Department:** Health Science and Sport Studies

**Project Dates:** January 2006 to March 2006

**Sponsoring Agent (if applicable):**

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**Project to be Conducted at:** California University of Pennsylvania and Alderson-Broaddus College

**Project Purpose:**
- [ ] Thesis
- [ ] Research
- [ ] Class Project
- [ ] Other

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**Required IRB Training**

The training requirement can be satisfied by completing the online training session at [http://snr.ucnl.nih.gov/](http://snr.ucnl.nih.gov/). A copy of your certification of training must be attached to this IRB Protocol. If you have completed the training at an earlier date and have already provided documentation to the California University of Pennsylvania Grants Office, please provide the following:
Please attach a typed, detailed summary of your project AND complete items 2 through 6.

1. Provide an overview of your project-proposal describing what you plan to do and how you will go about doing it. Include any hypothesis(es) or research questions that might be involved and explain how the information you gather will be analyzed. For a complete list of what should be included in your summary, please refer to Appendix B of the IRB Policies and Procedures Manual.

The purpose of this study is to examine burnout in athletes. This study will examine age, gender, and the burnout differences between team and individual sports. A descriptive research design will be used for this study. IRB approval will be obtained from California University of Pennsylvania. Permission from the athletic director of Alderson-Broaddus college will also be obtained stating that they give consent with the IRB approval from California University of Pennsylvania. The researcher will have each individual athlete sign a consent form, fill out a demographic survey, and finally take the Nades Athletic Burnout Inventory (EASI). The researchers’ hypotheses are that juniors and seniors will have higher burnout scores than freshman and sophomores, female athletes will have higher burnout scores than male athletes, and individual sport athletes will have higher burnout scores than team athletes. A 2 x 2 x 6 MANOVA will be used to determine if there is a difference in burnout scores between upperclassmen and underclassmen, males and females, and between individual sport athletes and team sport athletes.
2. Section 46.11 of the Federal Regulations state that research proposals involving human subjects must satisfy certain requirements before the IRB can grant approval. You should describe in detail how the following requirements will be satisfied. Be sure to address each area separately.

a. How will you insure that any risks to subjects are minimized? If there are potential risks, describe what will be done to minimize these risks. If there are risks, describe why the risks to participants are reasonable in relation to the anticipated benefits.

There are no potential risks that the subjects will face.

b. How will you insure that the selection of subjects is equitable? Take into account your purpose(s). Be sure you address research problems involving vulnerable populations such as children, prisoners, pregnant women, mentally disabled persons, and economically or educationally disadvantaged persons. If this is an in-class project describe how you will minimize the possibility that students will feel coerced.

The subjects will be volunteers from two Division II colleges from different sports.

c. How will you obtain informed consent from each participant or the subject’s legally authorized representative and ensure that all consent forms are appropriately documented?

Be sure to attach a copy of your consent form to the project summary.

Each athlete that chooses to participate must first sign a consent form (see attached Informed Consent Form) that will be given to them by the researcher.

d. Show that the research plan makes provisions to monitor the data collected to insure the safety of all subjects. This includes the privacy of subjects’ responses and provisions for maintaining the security and confidentiality of the data.

The survey will be given to the athletes by the researcher only. The coach will not be present to eliminate participation bias. No names will be placed on the survey to protect the athlete’s privacy. To
maintain the security and confidentiality of the data, it will be kept in a secure place.

3. Check the appropriate box(es) that describe the subjects you plan to use.

- Adult volunteers
- CAL University Students
- Other Students
- Prisoners
- Pregnant Women
- Physically Handicapped People
- Mentally Disabled People
- Economically Disadvantaged People
- Educationally Disadvantaged People
- Persons of legal material
- Children Under 18
- Neonates

4. Is remuneration involved in your project? □ Yes or □ No. If yes, explain here.

5. Is this project part of a grant? □ Yes or □ No. If yes, provide the following information:
   - Title of the Grant Proposal
   - Name of the Funding Agency
   - Dates of the Project Period

6. Does your project involve the debriefing of those who participated? □ Yes or □ No. If yes, explain the debriefing process here.
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

Student or Class Research

Student Researcher’s Signature

Supervising Faculty Member’s Signature if required

Department Chairperson’s Signature

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: 12-20-2005
REFERENCES


5. Flor KK. The Relationship Between Personality Hardiness, Stress, and Burnout in Selected Collegiate Athletes. [Thesis]. Muncie, Indiana: Ball State University; 1996.


7. Finch S. Comparison of Team and Individuals, Male and Female Athletes’ Potential for Burnout, and Coping Strategies. [Thesis]. Montreal, Quebec: McGill University; 1999.


ABSTRACT

Title: BURNOUT AND THE EFFECT ON THE COLLEGIATE ATHLETE

Researcher: Joshua D. Allen

Advisor: William Biddington EdD, ATC

Date: May 2006

Research Type: Master’s Thesis

Purpose: The purpose of this study was to examine burnout in collegiate athletes.

Problem: Burnout in college athletes is a relatively new area of study and needs to be looked at more closely. Athletic trainers need to be more informed to help care for or prevent athletes from suffering burnout.

Method: A descriptive type of research was conducted. The instrument used was the Eades Athletic Burnout Inventory and a demographic questionnaire. Subjects were 150 Division II collegiate athletes.

Findings: Significance difference was found between gender. Female athletes had higher burnout scores than male athletes. Significant difference was also found between team and individual sports. Team sports had higher scores than individual sport athletes.

Conclusion: Burnout can be found in the collegiate athlete and can be influenced by different demographics. Burnout needs to be examined more closely and athletic trainers should be more aware of the signs and symptoms to help prevent burnout.