College Athletes Perception of Care Provided by Certified Athletic Trainers

A THESIS

Submitted to the Faculty of the School of Graduate Studies and Research of California University of Pennsylvania in partial fulfillment of the requirements for the degree of Master of Science

By

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THESIS APPROVAL

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AKNOWLEDGEMENTS

I would like to take this time to thank all the people who had a part, directly or indirectly, in making this piece of work a reality.

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Secondly, I would like to thank my family. Thank you for believing in me and supporting me through this crazy decision of mine to come back to school after I swore I was done with it all. Thanks for being there to listen to my gripes about work, school, lack of funds... the whole nine. Your support helped make this thing happen.

Thanks to Joe Graceffo and everyone at the U. Thanks for allowing me to shake off some of the rust that the two years out of the profession piled up. My time there made me realize how much I missed athletic training.

Finally, I want to thank all my friends, here and at home. I brought a little bit of the Bport charm to Western PA and you guys definitely had a hand in that. The Cal Crew, what can I say? It’s been an interesting year. You guys had a big part in my striving to get this done. I am going to take away a lot of good memories. I was also able to find someone special in this crazy place called California Pennsylvania. Deanne, thank you so much for being in my life, who know what the future holds but with you around, it makes it all that much easier.
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INTRODUCTION

Most individuals who use the health care system are worried about the quality of care that they receive from their health care provider. It is important for patrons to feel as if they are getting the best quality of care that they possibly can. In today’s society everyone has his or her own idea of the kind of care that a health care professional should provide. It is in the best interest of the healthcare professional to find out what the needs of the masses are and work to provide for those needs.

This train of thought does not satisfy everyone. Patients will shop around to find one health care professional who can offer the services that the patient feels are appropriate for them. Each person is an individual, so quality care to one person may be something totally different to another. One patient may look for a different quality in their health care provider. One patient may look for quickness of service; one patient may look to see if the doctor treats them as an individual and not a diagnosis. Understanding what the patient is looking for is helpful in providing proper service.

This is true for health care across the board. From dentists to podiatrists, ophthalmologists to athletic
trainers; if the patient is not satisfied with the service that they are getting from one health care provider, then they will go to another. When the patient goes somewhere else is when business is lost and the healthcare provider loses credibility. Some professions cannot afford to lose their patients. Certified Athletic Trainers’, or ATCs, fall into this category.

The profession of athletic training is a relatively new one to the health care world. It was not recognized by the American Medical Association until 1992. Faced with the hardship of being such a young profession, Certified Athletic Trainers’ (ATC) must work to satisfy their patients, mainly athletes and active people.

It is the duty of the ATC to prevent, evaluate, care for, and rehabilitate injuries. There are other health care professions who believe that they can do the same thing as an ATC, however they do not have the specific care training that an ATC has. With other professions knocking at the door of the ATC, it is very important to ensure that the active population is satisfied with the care provided by ATCs.

Recently it has been shown that ATCs are getting the job done. In a study conducted by Robbins and Rosenfeld, athletes were more satisfied with the support that they
received from their ATC, during rehabilitation, than they were with their head or assistant coaches. It has also been found that athletes in higher profile sports are more satisfied with the quality of care of their athletic trainer than those athletes in lower profile sports. 6,7 High profile sports are considered sports that get the most requests for information from the sports information director. 6,7 Studies showing this information surveyed NCAA Division I and II athletes. No studies where found that looked at the perception of care of athletes at the NCAA Division III level.

This study will attempt to answer the following questions: 1) Is there a difference between gender for the perception of care in college athletes? 2) Is there a difference among the sport the athlete participates and their perception of care? 3) Is there a difference among the NCAA Division level for the athlete’s perception of care?
METHODS

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

Research Design

The research design for this study was descriptive. The dependent variable is perception of care. The independent variables are gender, sport and NCAA Division of competition. A strength of this study is the reliability of the instrument being used. Limitations of this study were only using NCAA Division II and III athletes from two schools.

Subjects

The subjects in this study consisted of athletes from mens (n=24) and womens (n=21) basketball, mens (n=39) and womens (n=37) soccer, baseball (n=40), and softball (n=42). A reliable survey was administered to these athletes. Questionnaires were completed by athletes from two different schools; California University of Pennsylvania
and Washington and Jefferson College. The limitations are that only two schools and six sports were examined. An Informed Consent Form (Appendix C1) was signed before the participants completed the questionnaire.

Instruments

The Student-Athlete Response Form (Appendix C2) examined the satisfaction of the care provided by the athlete’s Certified Athletic Trainers. The Cronbach alpha coefficient for this questionnaire is .94. The questionnaire scored a .83 on the split-half test for internal consistency. The split-half test also yielded an intraclass correlation coefficient of a 2-way, mixed-effect model that demonstrated significant reliability (P<.0000) for this instrument, with the raters’ average being .94. The Spearman-Brown coefficient was .92.7

A pilot study was conducted on three athletic programs at institutions not included in Unruh’s6 first study to validate the questionnaire. The pilot test sites were representative of the sample to be researched. This instrument is a mild variation of the first one, in that only wording was changed so questions specifically addressed perception of care.7
The questionnaire consists of 60 questions. The first 35 questions are based on a five point Likert scale. With scoring for the responses as follows: 5- very satisfied, 4- moderately satisfied, 3- unsure, 2 not satisfied, and 1- very dissatisfied. The next 15 questions are yes/no answer format with yes getting a score of 2 and no answers getting a score of 1. Possible scores may vary from 50 to 205. Lower scores mean the athlete has a lower perception of care than those with higher scores. The original instrument had 4 demographic questions, however, for the current study an additional six demographic questions were included questioning the respondents about gender of ATC, if they had an interaction with an ATC, the number of interactions the athlete may have had with an ATC, if they were injured and who provided their care.

Procedures

The researcher applied for Institutional Review Board (Appendix C3) approval at California University of Pennsylvania before conducting any research. The Athletic Director from Washington and Jefferson College (W&J) was contacted to receive consent to question athletes from W&J (Appendix C4). The researcher contacted the coach of each
of the teams to set up a time to meet with the team to administer the questionnaire. Upon contact with the coaches it was decided that it would be more convenient to have either the coach or the athletic trainer for that particular team pass out the questionnaires and then leave the room.

The researcher gave enough copies of the questionnaires to the coach or ATC of each team and gave them ample time to hand out the questionnaires. Once the questionnaire was completed, the student athletes gave the informed consent form and questionnaire to their coach or ATC. Once the coach or trainer had all the questionnaires back, they contacted the researcher and scheduled a time to pick up the completed questionnaires. Each survey was then inspected for completeness and legibility. The informed consent forms were inspected for completeness as well.

Once the questionnaires were collected from each of the teams, the completed forms were kept in a safe place until the researcher input the data into SPSS.

Hypotheses

The following hypotheses were based on a review of the literature and the intuition of the researcher.
1. Hypothesis: Gender will have an affect on perception of care.
   Null hypothesis: Gender will not have an affect on the perception of care.

2. Hypothesis: Sport will have an affect on perception of care.
   Null Hypothesis: There will not be a difference among sports for perception of care.

3. Hypothesis: Level of competition will have an affect on perception of care.
   Null Hypothesis: Division level will not have an affect on perception of care.

Data Analysis

SPSS 12.0 was used to analyze the date in this study. The level of significance was set at $\alpha \leq .05$ to test the acceptability of the stated hypotheses.

A 2x6x2 factorial Analysis of Variance (ANOVA) was used to determine if gender, sport, and Division level had an affect on perception of care.
RESULTS

Demographic Results

For this study 203 student athletes were questioned. Two of the questionnaires were not used due to lack of completeness, however if the participants failed to answer some of the demographic questions, their scores were still used. There ended up being 84 Division II athletes from California University of Pennsylvania and 119 Division III athletes from Washington and Jefferson College. Of the 203 questionnaires used, 101 were male participants and 102 were female. Table 1 reports the number of athletes in each sport by division.

Table 1. Frequency Table for Number of Athletes by Division

<table>
<thead>
<tr>
<th>Sport</th>
<th>Division</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mens soccer</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Womens soccer</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>Mens Basketball</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Womens Basketball</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Baseball</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Softball</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 2 reports the athletes' year in school.
Table 2. Frequency Table for Year in College

<table>
<thead>
<tr>
<th>Year</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>70</td>
<td>34.5</td>
</tr>
<tr>
<td>Sophomore</td>
<td>65</td>
<td>32.0</td>
</tr>
<tr>
<td>Junior</td>
<td>40</td>
<td>19.7</td>
</tr>
<tr>
<td>Senior</td>
<td>26</td>
<td>12.8</td>
</tr>
<tr>
<td>Senior +</td>
<td>2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 3 reports frequency of gender of ATC.

Table 3. Frequency Table for ATC Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>168</td>
<td>82.8</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>16.7</td>
</tr>
</tbody>
</table>

.5 Percent missing due to incomplete demographic

Table 4 reports if the athlete had an interaction with an ATC.

Table 4. Frequency Table for Interaction

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>191</td>
<td>94.1</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Table 5 reports the frequency of number of interactions the athlete had with an ATC.

Table 5. Frequency Table for Number of Interactions

<table>
<thead>
<tr>
<th>Number</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>6</td>
<td>3.0</td>
</tr>
<tr>
<td>1-2 per season</td>
<td>43</td>
<td>21.2</td>
</tr>
<tr>
<td>1-3 per week</td>
<td>46</td>
<td>22.7</td>
</tr>
<tr>
<td>3+ per week</td>
<td>107</td>
<td>52.7</td>
</tr>
</tbody>
</table>

.5 Percent missing due to incomplete demographic

Table 6 reports the frequency of whether or not the athlete sustained an injury which caused them to miss at least three practices.
Table 6. Frequency Table for Injury

<table>
<thead>
<tr>
<th>Injury</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>68</td>
<td>33.5</td>
</tr>
<tr>
<td>No</td>
<td>135</td>
<td>66.5</td>
</tr>
</tbody>
</table>

Table 7 reports the frequency of the athletes’ provider.

Table 7. Frequency Table for Provider

<table>
<thead>
<tr>
<th>Provider</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT Student</td>
<td>27</td>
<td>13.3</td>
</tr>
<tr>
<td>ATC</td>
<td>173</td>
<td>85.2</td>
</tr>
</tbody>
</table>

1.5 Percent missing due to incomplete demographic.

Table 8 reports the finding for number of ATCs the athlete had an interaction with.

Table 8. Frequency Table for Number of ATCs

<table>
<thead>
<tr>
<th>Number of ATCs</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>1</td>
<td>24</td>
<td>11.8</td>
</tr>
<tr>
<td>2</td>
<td>109</td>
<td>53.7</td>
</tr>
<tr>
<td>3</td>
<td>37</td>
<td>18.2</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>7.9</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>3.0</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Hypotheses Testing

All hypotheses were tested using an alpha level of .05.

Hypothesis 1: Gender will have an affect on perception of care.
Null Hypothesis: Gender will not have an affect on perception of care.

A 2 (Gender) × 6 (Sport) × 2 (Division level) between subjects factorial ANOVA was calculated to determine if there was a difference between gender for perception of care.

Conclusion: There was no significance between gender for perception of care ($F_{1,189} = .123, p = .727$). Males had a higher perception score (197.87±10.19) than females (196.95±12.77), but only slightly.

Table 9. A 2 (Gender) x 6 (Sport) x 2 (Division) Factorial ANOVA for Perception of Care 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>Sport</td>
<td>1371.179</td>
<td>5</td>
<td>274.236</td>
<td>2.410</td>
<td>.038†</td>
</tr>
<tr>
<td>Division</td>
<td>1786.397</td>
<td>1</td>
<td>17863.397</td>
<td>15.701</td>
<td>.000‡</td>
</tr>
<tr>
<td>Gender</td>
<td>13.945</td>
<td>1</td>
<td>13.945</td>
<td>.123</td>
<td>.727</td>
</tr>
<tr>
<td>Sport x Division</td>
<td>1494.910</td>
<td>4</td>
<td>373.728</td>
<td>3.285</td>
<td>.012†</td>
</tr>
<tr>
<td>Sport x Gender</td>
<td>1.446</td>
<td>1</td>
<td>1.446</td>
<td>.013</td>
<td>.910</td>
</tr>
<tr>
<td>Division x Gender</td>
<td>.000</td>
<td>1</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Sport x Division x Gender</td>
<td>.000</td>
<td>1</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Error</td>
<td>21503.585</td>
<td>189</td>
<td>113.776</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sum of squares showed zeros to the 3rd decimal point, however there is a difference between the variables when extended beyond the 3rd decimal point.

†$P < .05$
‡$P < .001$

Hypothesis 2: Sport will have an affect on perception of care.

Null Hypothesis: There will not be a difference among sports for perception of care.
A 2 (Gender) × 6 (Sport) × 2 (Division level) between subjects factorial ANOVA was calculated to determine if there was a difference among sport for perception of care.

Conclusion: There was a significant difference among sports for perception of care ($F_{5,189} = 2.41, p < .05$). It was found that athletes participating in womens basketball had a higher perception of care (204.05±2.13) than athletes participating in softball (195.43±12.59) and womens soccer (194.22±15.20).

Hypothesis 3: Division level will have an affect on perception of care.

Null Hypothesis: Division level will not have an affect on perception of care.

A 2 (Gender) × 6 (Sport) × 2 (Division level) between subjects factorial ANOVA was calculated to determine if there was a difference between division levels for perception of care.

Conclusion: There was a significant difference between division levels for perception of care ($F_{1,189} = 15.701, p < .001$). Athletes competing in Division III sports had a higher perception of care score (200.3±9.30) than Division II athletes (193.3±13.08).
Additional Findings

While testing for the hypothesis, it was found that there was a significant interaction. The interaction between division and sport was significant ($F_{4,189} = 3.285, p < .05$). It was found that Division III womens basketball players had a higher perception of care (203.94±2.33) than did Division II athletes competing in softball (192.25±15.12) and womens soccer (186.79±16.59). Figure 1 displays the interaction between Division and Sport. The interaction between gender and sport yielded no significance ($F_{1,189} = 3.285, p = .910$).

![Figure 1. Perception of Care Scores for Sport by Division](image)

Table 10 shows the perception of care scores for Division and Sport.
<table>
<thead>
<tr>
<th>Sport</th>
<th>Division</th>
<th>Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mens Soccer</td>
<td>II</td>
<td>198.06</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>198.23</td>
</tr>
<tr>
<td>Womens Soccer</td>
<td>II</td>
<td>186.79</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>198.74</td>
</tr>
<tr>
<td>Mens Basketball</td>
<td>II</td>
<td>185.60</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>203.29</td>
</tr>
<tr>
<td>Womens Basketball</td>
<td>II</td>
<td>204.50</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>203.94</td>
</tr>
<tr>
<td>Baseball</td>
<td>II</td>
<td>196.42</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>201.57</td>
</tr>
<tr>
<td>Softball</td>
<td>II</td>
<td>192.25</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>198.32</td>
</tr>
</tbody>
</table>
DISCUSSION

To discuss the results of this study the following sections are presented: (1) Discussion of Results, (2) Conclusions, and (3) Recommendations.

Discussion of Results

Upon investigation of college athletes' perception of care, the researcher was able to find that the sport played, as well as the Division level which that sport is played, have a significant effect on athletes’ perception of care. However, gender of the athlete did not have a significant effect on perception of care.

The findings of this research supported the hypothesis that sport would have an effect on perception of care scores. The research also found that level of competition does have an effect on perception of care; however the opposite of what was hypothesized was found to be true, in that, Division III athletes had a higher perception of care than did Division II athletes. The research rejects the hypothesis that gender will have an effect on perception of care.
There have only been a few studies examining college athletes’ perception of care. Findings from those studies do, however, differ from what was found in this study. Conflicting studies have shown that both genders have a higher perception of care than the other.⁶,⁷ In the present research, we were unable to find a significant difference in perception scores for gender. Reasons behind the present findings might include location of the study as well as lower number of subjects questioned.

The present study found that Division III athletes had a higher perception of care than Division II athletes. Speculation as to why the Division III athletes have a higher perception of care may be that there were less clinical ATCs present at Washington and Jefferson College (W&J), three, than there were at California University of Pennsylvania, ten. The athletes at W&J may take this into consideration when answering questions about their perception of care. Past studies have shown that patients are more satisfied at smaller medical institutions than they are at larger ones.⁸

Individual sports have not been evaluated in the past for perception of care scores. Sport profile, however has been studied. Some of the sports in this study that would be considered high profile sports are baseball and mens and
womens basketball. The rest would be considered low profile. Past research states that athletes in high profile sports have a higher perception of care than do athletes in lower profile sports. The present study found similar results. If the present had evaluated sport profiling then some of the same conclusions could be drawn, in that, womens basketball and baseball have the highest perception scores.

An explanation for the team’s perception of care score could have occurred because of the number of athletes on the teams. As found in this study, teams with lower numbers might have a better relationship with their ATC than teams with a higher number of athletes. If the numbers are lower, the ATC may not feel as rushed while taking care of the athletes. Fewer athletes also make it easier for the ATC to personally know and interact with each one. It is much easier to get to know 10 athletes than it is to take the time to get to know 25.

In addition to the lower number of providers resulting in higher perception of care scores, the length of time that an athlete spends under the care of a provider may play a role in that athlete’s perception of care score. The athletic training staff at W&J included two full-time ATCs and one graduate assistant ATC. Cal U’s staff
consists of five full-time ATCs and five graduate assistant ATCs. This results in the baseball, softball, womens and mens soccer, and track teams at Cal U dealing with a new ATC every year, therefore the athletes spend part of the year getting to know a new ATC. It is in the belief of the researcher if the athlete gets to know their ATC on more than just a patient-provider relationship then the athlete might have a higher perception of care score.

The findings in this study was limited to the use of only two schools in Western Pennsylvania, whereas the other studies on this topic used athletes from more than just two schools. The present study did not have as many subjects as previous studies and the results are not representative of the perception of athletes from other regions across the country.

Conclusion

The overall perception score (197.41 ± 11.54), shows that athletes are satisfied with the care they are receiving from their ATC. Though this study only questioned athletes from two schools in Western Pennsylvania, it revealed that like other health care providers,8,10,11 our patients (athletes) are happy with the
services that we provide them. This is an important factor as the profession of Athletic Training is trying to make a stronger case for third party reimbursement.

Recommendations

If the profession of athletic training wants to continue to provide its patients with quality care, ATCs must continue to provide care that is based around the six domains of athletic training. Certified Athletic Trainers should also strive to uphold the Code of Ethics to ensure that they are providing all athletes/patients with the best care possible.

Another way in which the profession of athletic training can continue to provide its patients with the highest quality of care is to continuously get feedback from the patients. Whether it is after each interaction or annually, feedback is the key to finding out what the patient wants. Each athletic training setting, college, high school/clinic, clinic, industrial, or professional, needs to come to a minimum quality score and strive to provide the best care possible.

While this study examined athletes from one Division II and one Division III institution for perception of care
provided by Certified Athletic Trainers, it is the recommendation of the researcher that further studies are conducted on athletes at all levels of competition. This needs to be done to determine if ATCs are providing adequate care across the board. In order for the profession of athletic training to better understand where improvements are needed for quality care, it is the recommendation of the researcher that athletes/patients in all ATC employment settings be surveyed regarding their perception of care. This could result in collaboration to provide the highest quality of care at all settings.

It is also in the recommendation of the researcher to study the time period of care for athletes to determine if differences exist between care from one full-time ATC for four years versus care provided by a graduate student ATC who may only be there one or two years. The results of that study could help determine hiring protocol.
REFERENCES


APPENDICIES
APPENDIX A

Review of the Literature
Review of the Literature

This literature review will discuss previous literature surrounding athletes and their perception of care from their Certified Athletic Trainer (ATC). Making sure an athlete feels comfortable with the care they receive is important to the profession of Athletic Training. If the athlete is satisfied with their care then the ATC is doing his or her job. This literature review will be divided into three sections: 1) Role of the Athletic Trainer, 2) Athlete’s perception of care from their athletic trainer, and 3) General population’s perception of care of general health care. A summary of the literature will be provided at the end of the literature review.

Role of the Athletic Trainer

The roles of the Certified Athletic Trainer have been outlined by the Board of Certifications’ Role Delineation study. This study breaks down the role of the Certified Athletic Trainer (ATC) into six domains. Each domain is its own entity and together makes up the roles of the ATC.
The domains build upon one another to ensure proper care throughout the ATC’s interaction with athletes.

The first domain is prevention. Prevention is the ability to discern, evaluate, and communicate risk associated with participation in athletic and physical activities. In order for the ATC to do this they must make sure that they educate their athletes about the risks associated with participation in order to minimize risk of injury and illness. They must interpret pre-participation exams and other screening information. The ATC is required to offer instruction about standard protective equipment and apply appropriate prophylactic or protective measures using commercial or custom made products to minimize the risk of injury. Identifying safety hazards that go along with the activity, playing area and equipment is also something the ATC needs to go over with their athletes. A sanitary treatment area in order to minimize risk of injury and illness is something that the ATC needs to be able to provide for his or her athletes. Monitoring athletes in different environmental conditions to ensure safe participation must be done. Offering designed physical conditioning programs to minimize injury is another role of the ATC, as well as educating healthy lifestyle practices to promote wellness.
The second domain is clinical evaluation and diagnosis. The responsibilities of the ATC in the evaluation and diagnosis of injuries and conditions follow standardized clinical practice in the area of diagnostic reasoning and medical decision making. The ATC must be able to complete the following tasks: 1) be able to obtain a history through observations, interviews and by reviewing medical records to assess the pathology and extent of the injury, illness or condition, 2) be able to inspect the involved area visually to assess the pathology and extent of the injury, 3) be able to palpate involved areas using standard techniques to assess the pathology and extent of injury, 4) be able to perform special tests to assess the pathology and extent of the injury, 5) be able to formulate, on the basis of the information gathered, a clinical impression to determine the course of action. Once the ATC has determined the problem they must be able to educate the injured person on how to take care of the present injury to keep further complications from occurring. The ATC should then also be able to communicate with other health care professionals to coordinate appropriate care.1-5

The third domain is immediate care. For this domain the ATC must show the following competences: employ life saving techniques through the use of standard emergency
procedures in order to reduce morbidity and possible death, prevent any non life threatening condition from getting worse through the use of standard procedures in order to reduce morbidity, start the transfer of care for conditions beyond the scope of the practice of the ATC by using referral strategies to stabilize or prevent the conditions from getting worse, direct the patient in standard immediate care procedures. Executing the established emergency action plan is also something the ATC must be able to do.¹⁻⁵

Treatment, rehabilitation, and reconditioning are the fourth domain. The ATC, based on impressions from the clinical evaluation and by considering age specific criteria, determines appropriate treatment, rehab, and reconditioning strategies. The ATC must be able to do the following: 1) administer therapeutic and conditioning exercises in order to facilitate recover, function and performance, 2) administer therapeutic modalities in order to facilitate recovery, function, and performance, 3) apply braces, splints or assistive devices in order to facilitate recovery, function, and performance, 4) administer treatment for general illness to facilitate recovery. Reassessing the status of injuries or conditions in order to determine appropriate treatment, rehab, and
reconditioning to evaluate readiness to return to desired level of activity is another job of the ATC. The ATC must educate patients on treatment, rehab, and reconditioning methods to facilitate recovery. Along with education they must also offer guidance or counseling to facilitate recovery.\textsuperscript{1-5}

Organization and administration is defined as a series of plans, policies and procedures by which ATCs organize the athletic training program to ensure responsive and efficient operations. This is the fifth domain. To make sure this happens, the ATC has to establish actions plans for response to injury. They need to establish policies and procedures for the management and delivery of health care services. The ATC must manage human and fiscal resources by utilizing appropriate leadership, organization, and management techniques to provide efficient and effective healthcare services. The ATC is required to maintain records using an appropriate system to document services rendered, provide for continuity of care, facilitate communication and meet legal standards. Developing professional relationships with patients by communicating to enhance the delivery of health care is something the AT must be able to do as well.\textsuperscript{1-5}
Professional responsibility, the sixth domain, as a role of the ATC acknowledges that competent practice involves compliance with ethical, legal, and other professional standards. The purpose of this is to protect the public. Demonstrating professional conduct by complying with applicable standards and maintaining continuing competence to provide quality athletic training services falls into this domain. Being able to adhere to statutory and regulatory provisions and other legal responsibilities relating to the practice of athletic training by maintaining an understanding of these provisions and responsibilities in order to contribute to the safety and welfare of the public is a requirement of the sixth domain. Educating appropriate patients and entities about the role and standards of practice of the athletic trainer through formal and informal means to improve the ability of those patients and entities to make informed decisions is also the job of the ATC.1-5

Athlete’s Perception of Care

Perception is defined as, “knowledge or understanding that comes from taking in through the mind.”\(^6\) In the world of sports, athletes are asked to perceive many
things. How a Certified Athletic Trainer takes care of them, is one. If an athlete perceives the care they receive from the ATC as poor, then they will be less likely to go to that individual in the future.  

Robbins and Rosenfeld questioned 35 athletes from a large southeastern university who had missed at least three days of practice due to injury. The athletes were questioned on the level of support that they received from their head coach, assistant coaches, and ATC as well as which type of support they considered most important. When it comes to care and support, athletes received more from ATCs as opposed to either their head coach or assistant coaches. This holds true before the injuries occur as well as during the rehabilitation process.

The athletes questioned stated that the ATC’s pre injury listening support was greater than that of the assistant coaches. Athletes were also more satisfied with the ATC’s listening, task appreciation, task challenge, emotional and reality conformation support than they were with that of the head or assistant coaches.

It is important for the ATC to give each athlete the same care when dealing with different sports. However, some athletes believe that they do not receive equal care from their ATC. Unruh found that female athletes (n=178),
did not have as good a perception of care from their ATC as did male athletes (n=165). Taking it a step further, the perception was lower for low profile athletes than it was for high profile athletes. High profile sports consisted of football, men’s and women’s basketball, and baseball. The sports profile was based on the amount of information requested from the sports information director. No significant difference in perception among athletes between NCAA Divisions was found.

To come to these findings, Unruh used a Likert style questionnaire, which consisted of 50 questions. He distributed them to 14 Division I schools and 17 Division II schools.

Based on later research by Unruh, he found that of the four major independent variables that he examined, sex, division, sports profile and time zone of the athlete; the only one with a significant impact on perception scores was sport profile (P=.000).

Regardless of where the athletic trainer is providing care, patients/athletes seemed to have a high perception of the care being provided. Based on the Outcomes Assessment by Campbell, he found that patients/athletes had a higher perception of care after they had received care from an ATC. Patients/athletes (N=5,238) from different ATC
employment settings, including sports medicine clinics, high schools, colleges and universities, and industrial settings stated their overall satisfaction with certified athletic trainers was 3.89 of 4.

General Population’s Perception of Care

Getting the general population’s perception of care is important in insuring that they are receiving the quality of care that they want. Much like Certified Athletic Trainers’ perception of care, it is important for physicians to know that the patients are satisfied with the care they receive. As well, patients’ perception of care is a good way for other patients to decide if they want to use that particular medical service or not. The best way to assess patients’ perceived quality of care is through surveys. Many studies have examined patients perceived quality of care.

When trying to determine which attributes of a primary healthcare experience have the most impact on patient satisfaction Otani et al\textsuperscript{11} found that the care from the physicians themselves had the highest satisfaction score as compared to the rest of the staff. Of the patients surveyed (n=8465) physician care had a mean satisfaction
score of 4.19 out of 5. The rest of the staff scored a 4.10 and accessing the healthcare scored 3.89.

Boscarino and Adams\textsuperscript{12} conducted a study to examine the difference between the concern for quality care and the need for information about care. The ethnic breakdown of the 1,001 people surveyed was: 61\% (n=612) Caucasian, 13\% (n=125) African American, 16\% (n=163) Hispanic and 10\% (n=101) other. This study showed that 46\% of the Caucasians surveyed were more concerned about quality of care as opposed to receiving information about doctors and hospitals. There were 68\% of the African Americans, 48\% of the Hispanics and 40\% of the others in agreement. The study also found that New Yorkers do in fact use the information about quality of health care providers when making health care decisions. Of those surveyed, women were more likely to use the information provided to them to make their health care decisions.

Patients also have stated that cultural factors have an affect on the quality of the medical care that they receive. In a 2005 study conducted by Napoles-Springer,\textsuperscript{13} there were many factors that influenced the quality of their medical encounters. Such factors included: sensitivity to alternative medicine (17\%), health insurance based discrimination (12\%), social class based
discrimination (9%), ethnic concordance of the doctor and the patient (8%), age based discrimination (4%), physicians acceptance of the role of spirituality (2%), family (2%), and ethnic based discrimination (11%). The participants surveyed consisted of 61 African Americans, 45 Latinos and 55 non-Latino whites. It was concluded in this study that in order to provide quality health care to diverse participants flexibility is required to elicit and respond to cultural factors in medical encounters.

Participants in a study regarding total knee arthroplasty were asked to rate their satisfaction with the follow up care they received for infection. The average satisfaction score was 71.7 out of 100.\textsuperscript{14} The reason for such scores for the 45 participants was the fact that they believed there should not be any infection for such a procedure. This shows that if you do your job right the first time, it reflects a higher quality of care for your patients.

In a 2004 study by Jackson et al\textsuperscript{15} it was found that there was no significant difference in the perception of care between patients with medically unexplained symptoms and those with physical disease. Of the 172 surveyed, only 88\% of the participants from the neurology clinic (n=112) and 77\% of the participants from the cardiology clinic
completed follow up surveys about their particular conditions. A significant correlation was found, however, between satisfaction and age. It showed that the older the patient the higher the level of satisfaction.

Medical care in the military has also been examined to see if the patients are satisfied with the care that they receive. In a 2005 study, it was found that of the 154,893 patients surveyed, the average satisfaction score was a 6.22 on a 7 point satisfaction scale. The four major branches of the military were involved in this study, 51,445 patients from the Army with a mean score of $6.19 \pm 1.17$, 30,625 patients from the Navy ($6.22 \pm 1.12$), 64,413 patients from the Air Force ($6.26 \pm 1.08$) and 8,410 patients from the Marines ($6.16 \pm 1.17$). Patients were asked a variety of questions regarding the care they received as well as questions about the situation, such as waiting time, length of visit and days between when the appointment was made and the day that they saw the provider.

The perception of health care by women in prison has also been looked at. It has been found that there is neither an exclusively positive view nor exclusively negative view of the care provided. However, of the 15 inmates interviewed there where more instances of negative
care than there where of positive care.$^{17}$ Some of the negative instances of care included, being rushed, not being given sufficient care and being treated as a second class citizen.

Another field of health care that has explored the perception of patient care is nursing. Nurses have a tough job because they almost act as a mediator between doctor and patient. Nurses have also had the reputation as a motherly figure. Laschinger et al$^{18}$ found that patients had a positive perception of care provided by nurses at three different types of hospitals; teaching, community, and small. Of the 1041 patients surveyed, the mean for total patient satisfaction with nursing care was 4.06, with small hospitals having the highest of the three with an average score of 4.23 out of a possible 5 points. It has been found that nurses themselves value the humanistic aspects of care more so than the patients.$^{19}$ It has also been found that nurses do their best to provide quality care to patients even if work morale is low.$^{20}$

Gardner et al$^{21}$ found that wherever surgery is performed, be it at a hospital based ambulatory (outpatient) center, a freestanding ambulatory unit in a small town or a freestanding ambulatory unit in a midsized town, has no significant effect on the satisfaction of
There was no difference in the place that they patient went and the satisfaction of care they received. The number of subjects was very low, of 52 participants 47 were considered unusable, so they were only able to look at the average of those used. However, it has been found that patients receiving ACL (anterior cruciate ligament) reconstruction are more satisfied with an outpatient surgery as opposed to an inpatient surgery. Of 21 inpatient individuals and 19 outpatient individuals surveyed, the outpatient group had an average satisfaction score of 85.1 out of 100 as opposed to 78.2 for the inpatient group.

In a study conducted on 36 patients scheduled to have high dosed chemotherapy with autologous stem cell transplantation, it was found that patients perceived their highest quality of care at six months after the last treatment. Schulmeister et al found that satisfaction scores were at their lowest one month post treatment. They also found that the satisfaction score at six months post treatment was higher than the pretreatment satisfaction score in patients with no evidence of disease.
Summary

The role of the Certified Athletic Trainer is outlined by the Role Delineation Study\textsuperscript{1}. The six domains of the Role Delineation Study provide a framework for how ATCs should provide care for the athletic population. The mission of the ATC is to strive to provide the best safest care possible. Ensuring that the athletes are satisfied with the care provided is vital for the profession of athletic training to be on the same level as other health care professionals.

It has been shown that athletes at the NCAA Division I level a greater perception of care then their NCAA Division II counter parts. Males also have a higher perception of care then females.\textsuperscript{7}

The perception of care in the general population varies based on sex, race and ethnic background. In all it seems that most people are happy with the care that they receive from their health care providers.
APPENDIX B

The Problem
Statement of the Problem

In college sports today Certified Athletic Trainers (ATC) are called upon to take care of a number of athletes. Certified Athletic Trainers are schooled with the knowledge to care for their athletes in a professional manner. As ATCs we feel that we are providing our athletes with the best care possible. However, do the athletes feel that they are getting the care that they need? Are these athletes getting the quality of care that they need for their specific sport, gender, or competition level? As ATCs it is important to know if the athlete feels comfortable with the quality of care that ATC’s provide them. If the athletes do not feel comfortable, it is important to know in what areas ATCs need to improve. It is also important to look at different sports, genders, and levels of competition to make sure that we are not favoring one sport over another.

The purpose of this study was to examine the perception of the quality of care that athletes receive from their ATC. The dependent variable for this study was the perception of care. The independent variables were gender, sport, and NCAA Division of competition.
Definition of Terms

The following terms have been defined to increase overall understanding of the study:

1) **Perception of care** - how an athlete views the care that they are getting from their Certified Athletic Trainer.

2) **Quality** - degree of excellence

3) **Satisfaction** - fulfillment of need or want, feeling as though all your needs have been met

4) **Student-Athlete Response Form** - an instrument created to assess athletes perception of care.

Basic Assumptions

The following are basic assumptions associated with this study:

1) College athletes are the most qualified group to answer this survey for the purposes of this study.

2) All respondents will answer the survey honestly to the best of their ability.

3) All respondents will be given adequate time to fill out the questionnaire.

4) All the participants in this study will be NCAA Division II or III athletes.
Limitations of the Study

The following are possible limitations to this study:

1) Only questioning athletes from Division II and III.
2) Only questioning athletes from two schools in Western Pennsylvania.
3) Not all members of the team may be present the day the questionnaire is administered.

Significance of the Study

The purpose of this study was to examine the perception of care of college athletes. Certified Athletic Trainers’ are given the knowledge to help with the prevention, recognition, and treatment of athletic injuries. ATCs strive to provide the best care possible for their athletes, so that the athletes can achieve maximal success in their athletic competition. It is important to acquire feedback from athletes to make sure the care the ATCs provide are up to the standard of the athletes. If the athletes are not content with the quality of care, they may shy away from the ATC, possibly making their injuries worse. The interaction between the ATC and the athlete should be open. The ATC should not act as a dictator. Giving reasons for certain rehabilitation practices helps
the athlete to further understand the reason for said practices.

In this study I believe I will find that overall college athletes will perceive their quality of care to be positive. I think that there may be some discrepancies between quality scores when comparing male athletes to female athletes.

From the information in this study Certified Athletic Trainers’ can look to see what areas of care they need to improve. This is important because if athletes are not happy with the care they receive, it makes it harder for ATCs to bring themselves to the same level as other health care providers. If athletes are happy with the quality of care they are receiving, it goes to show that ATCs are getting the job done and deserve to be put in the same arena as other health care providers. The results of this study could also help ATCs in their fight for third party reimbursement.
APPENDIX C

Additional Methods
APPENDIX C1

Informed Consent Form
Informed-Consent Form

Jason Porterfield, who is a Certified Athletic Trainer, has requested my participation in a research study at this institution. The title of the research is College Athletes Perception of Care Provided by Certified Athletic Trainers’.

I have been informed that the purpose of the research is to examine the perception of care college athletes receive from their Certified Athletic Trainer.

My participation will involve filling out a 59 question survey regarding my interactions with my athletic trainer. The questionnaire should take no longer than 15 minutes to complete. I will also be asked some demographic questions.

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

There are no feasible alternative procedures available for this study.

I understand that the possible benefits of my participation in the research include voicing my opinion of the care that I receive which would lead to increased quality of care given by Certified Athletic Trainers.

I understand that the results of the research study may be published but my name or identity will not be revealed. In order to maintain confidentiality of my records, Jason Porterfield will not ask for my name and all data will be stored in a secure location.

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

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 Jason Porterfield, 639 Russian St Apt 7, California, PA 15419, (518)-495-2564. Por3265@cup.edu or Dr. Carol Biddington, Biddington@cup.edu.

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 Signature________________________________________Date______

Other signature (if appropriate)_____________________________Date______

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.

These elements of informed consent conform to the assurance given by California University of PA to protect the rights of human subjects.

I have provided the subjects/participants 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

STUDENT-ATHLETE RESPONSE FORM
# Student-Athlete Response Form

This questionnaire is part of a study to research the satisfaction of care provided to intercollegiate student-athletes by their athletic trainers. Your participation is requested. Nowhere on this questionnaire will you be identified and all of the information you provide will be kept anonymous.

Please circle the response that best suits your satisfaction with your athletic trainer(s) and the services they provide.

**VS** = **Very Satisfied**, **MS** = **Moderately Satisfied**, **U** = **Unsure**, **NS** = **Not Satisfied**, **VD** = **Very Dissatisfied**.

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<thead>
<tr>
<th>Question</th>
<th>Very Satisfied</th>
<th>Moderately Satisfied</th>
<th>Unsure</th>
<th>Not Satisfied</th>
<th>Very Dissatisfied</th>
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<tr>
<td>(1) I am VS MS U NS VD with the quality of care provided by my athletic trainer</td>
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<td>(2) I am VS MS U NS VD with the courtesy shown to me as an athlete by my athletic trainer</td>
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<td>(3) I am VS MS U NS VD that my athletic trainer provides a safe environment</td>
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<td>(4) I am VS MS U NS VD with the knowledge demonstrated by my athletic trainer regarding my injuries</td>
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<td>(5) I am VS MS U NS VD with the terms my athletic trainer uses when explaining my injury to me</td>
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<td>(6) I am VS MS U NS VD with the level of confidentiality demonstrated by my athletic trainer concerning my medical information</td>
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<td>(7) I am VS MS U NS VD with my athletic trainers’ method for proper rehabilitation of athletic injuries</td>
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<td>(8) I am VS MS U NS VD that the answers to my questions provided to me by my athletic trainer are accurate</td>
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<td>(9) I am VS MS U NS VD that my athletics trainer views each injury equally important</td>
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<td>(10) I am VS MS U NS VD with how my athletic trainer demonstrates appropriate concern for my feelings and emotions following an injury</td>
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<td>(11) I am VS MS U NS VD with amount of time it takes for an athletic trainer to approach me for consultation once I enter the athletic training room</td>
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<td>(12) I am VS MS U NS VD with the level of concern my athletic trainer expresses about each injury regardless of how many I have had in the past</td>
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<td>(13) I am VS MS U NS VD with my athletic trainers’ initial response time to my injury during a practice or game</td>
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<td>(14) I am VS MS U NS VD that the location of my athletic trainer during practice is such that he/she is capable of responding quickly and properly to an injury</td>
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<tr>
<td>(15) I am VS MS U NS VD with the athletic training room hours prior to practice/competition</td>
<td></td>
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<tr>
<td>(16) I am VS MS U NS VD with my athletic trainers control of emergency situations</td>
<td></td>
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<tr>
<td>(17) I am VS MS U NS VD with my athletic trainers utilization of other athletic trainers or other medical professionals when he/she is unsure of an injury</td>
<td></td>
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</tbody>
</table>
(18) I am VS MS U NS VD with my athletic trainers’ explanation of the opinions provided by the physician.

(19) I am VS MS U NS VD with the time lapsed between when I am referred to see a physician until the time I see the physician.

(20) I am VS MS U NS VD with the clarity of language in which my athletic trainer uses when explaining the nature of my injury to me.

(21) I am VS MS U NS VD with the level of concern my athletic trainer portrays toward each athlete no matter what sport they are in.

(22) I am VS MS U NS VD with the quality of care provided to each athlete no matter what gender they are.

(23) I am VS MS U NS VD that the time my athletic trainer takes to get to practice is appropriate to provide proper medical supervision.

(24) I am VS MS U NS VD with the amount of medical supplies provided for use by athletic trainers.

(25) I am VS MS U NS VD that my athletic trainer provides me with the information I need to prevent re-injury after sustaining an initial injury.

(26) I am VS MS U NS VD with the availability of my team physician.

(27) I am VS MS U NS VD with the time it takes from when I get injured until the time the coaching staff is aware of my injury.

(28) I am VS MS U NS VD with the conduct in which my athletic trainer carries him/herself.

(29) I am VS MS U NS VD with the rehabilitation techniques provided to me by my athletic trainer.

(30) I am VS MS U NS VD with the level of respect my athletic trainer gives me.

(31) I am VS MS U NS VD with the assessment process my athletic trainer uses to evaluate my injuries.

(32) I am VS MS U NS VD with the treatment my athletic trainer uses to rehabilitate my injury.

(33) I am VS MS U NS VD with how my athletic trainer communicates with my coaching staff about my illness or injury condition.

(34) I am VS MS U NS VD with the amount of time spent from injury onset to when I see an appropriate medical professional.

(35) I am VS MS U NS VD with my athletic trainer’s skill in various taping and wrapping techniques.
Please circle Y (Yes) or N (No). Your response should represent your satisfaction with your athletic trainer(s) and the services they provide.

(36) My athletic trainer brings enough medical supplies when the team is on the road. Y N

(37) I am confident that my athletic trainer is competent and knowledgeable. Y N

(38) I feel comfortable when approaching my athletic trainer about injuries or illness. Y N

(39) I am satisfied with the way my athletic trainer personally treats me. Y N

(40) I am satisfied that my athletic trainer is truly interested in helping me fully recover from my injury in a timely fashion so that I can return to competition. Y N

(41) I feel my athletic trainer is competent with new uses of treatments. Y N

(42) I am satisfied with my athletic trainer’s desire to become a better athletic trainer. Y N

(43) My athletic trainer is present and in position to assist me in the event that I am injured. Y N

(44) My athletic trainer is knowledgeable with current trends in athletic training. Y N

(45) All of the athletic trainers trust one another to properly assist me as an athlete. Y N

(46) I am satisfied with the quality of care I receive in the training room. Y N

(47) The training room is equipped with the necessary tools for quality care. Y N

(48) I am confident in the athletic trainer’s decision to remove me from a game or practice due to my injury or illness. Y N

(49) I am satisfied with the training room hours of availability to athletes prior to practice or competition. Y N

(50) Overall, I am satisfied with the athletic training services. Y N
Please answer each of the following questions.

Sport in which you participate (please circle one)
- Mens Soccer
- Womens Soccer
- Mens Basketball
- Womens Basketball
- Baseball
- Softball

Institutions competitive level (please circle one)
- NCAA Division II
- NCAA Division III

Gender (please circle one)
- Male
- Female

What year in school are you (please circle one)
- Freshman
- Sophomore
- Junior
- Senior
- Senior +

Gender of ATC (please circle one)
- Male
- Female

Have you had an interaction with a Certified Athletic Trainer in the past year (please circle one)
- Yes
- No

How many interactions do you have with your ATC (please circle one)
- None
- 1 or 2 per season
- 1-3 a week
- 3+ per week

Have you sustained an injury in the last year that has resulted in missing more than 3 practices?
- Yes
- No

Who provides most of your athletic training care (please circle one)
- Student AT
- ATC
- other

How many Certified Athletic Trainers have you had an interaction with (please circle one)
- 5+
- 5
- 4
- 3
- 2
- 1
- 0

Approved by the California University of Pennsylvania Institutional Review Board
APPENDIX C3

INSTITUTIONAL REVIEW BOARD
California University of Pennsylvania

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: College Athletes Perception of Care Provided by Certified Athletic Trainers

Researcher/Project Director: Jason Porterfield

Phone #: 518-495-2564  E-mail Address: por3265@cup.edu

Faculty Sponsor (if required): Dr. Carol Biddington

Department: Health Science and Sport Studies

Project Dates: January 2006 to March 2006

Sponsoring Agent (if applicable):

Project to be Conducted at: one Division II school and one Division III school

Project Purpose: ☑ Thesis ☐ Research ☐ Class Project ☐ Other

Keep a copy of this form for your records.
**Required IRB Training**

The training requirement can be satisfied by completing the online training session at http://eirp.nei.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:

Previous Project Title  

Date of Previous IRB Protocol
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(ies) 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 look at the perception of care that college athletes receive from their Certified Athletic Trainer. Obtain IRB approval from California University of Pennsylvania. Contact the Athletic Director at Washington and Jefferson College to obtain consent. Contact coaches to set up a time to meet with the teams so I can administer the questionnaire. The hypotheses are: 1. Gender will have an affect on perception of care. 2. There will be a difference among sports for perception of care. 3. Athletes at the Division II level will have a higher perception of care than Division III athletes. Data will be analyzed using a 2x6x2 factorial Analysis of Variance (ANOVA). This will be used to determine if gender, sport, and Division level have an effect on perception of care.

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 foreseeable risks.

   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. This study will be based on the population for each sport on a voluntary basis.

   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. Informed Consent will be filled out by the participant and once completed will be placed in a sealed envelope and kept in a secure place. The Informed Consent is attached.

   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. Once data is collected it will be placed in a sealed envelope and kept in a safe place where only the researcher will have access.
3. Check the appropriate box(es) that describe the subjects you plan to use.

☐ Adult volunteers  ☐ Mentally Disabled People
☒ CAL University Students  ☐ Economically Disadvantaged People
☒ Other Students  ☐ Educationally Disadvantaged People
☐ Prisoners  ☐ Fetuses or fetal material
☐ Pregnant Women  ☐ Children Under 18
☐ Physically Handicapped People  ☐ 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.

7. If your project involves a questionnaire interview, ensure that it meets the requirements of Appendix ___ in the Policies and Procedures Manual.
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

[Signature]  12/15/05

Chairperson, Institutional Review Board  Date
APPENDIX C3

Athletic Director Consent Form
I, Bill DuFossé, give Jason Porterfield permission to conduct a research study at Washington and Jefferson College only with IRB approval from California University of Pennsylvania.

Bill DuFossé
Athletic Director of Washington and Jefferson College
REFERENCES


ABSTRACT

TITLE: College Athletes Perception of Care Provided by Certified Athletic Trainers

RESEARCHER: Jason M. Porterfield

ADVISOR: Dr. Carol Biddington

DATE: May 2006

RESEARCH TYPE: Masters Thesis

PURPOSE: The purpose of this study was to examine the perception of the quality of care that athletes receive from their ATC.

Problem: Certified Athletic Trainers provide care for many athletes. It is important to make sure that the athletes are satisfied with the care that they receive.

METHOD: A descriptive type design was used for this study. The Student Athlete Response Form, created by Scott Unruh, ATC, was the instrument that was used. Subjects were 203 student athletes from Washington and Jefferson College and California University of Pennsylvania.

FINDINGS: Division III athletes had a significantly higher perception of care (200.34±9.30) than Division II athletes (193.25±13.08). It was found that womens basketball had a higher perception of care (204.05±2.13) than softball (195.43±12.59) and womens soccer (194.22±15.20).

CONCLUSION: College athletes are highly satisfied with the care they receive from Certified Athletic Trainers.