Abstract

Intercollegiate Athletes Perceptions of Athletic Training

by

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The perceptions of intercollegiate athletes in selected National Association of Intercollegiate Athletics (NAIA) institutions were assessed in relation to the athletic training room and the services rendered by athletic trainers in this study. A Likert scale questionnaire including 34 statements was distributed to NAIA and CCAA athletes (N= 562) who were on the men's and women's basketball teams, the men's and women's soccer teams, and the women's volleyball team. Four intercollegiate athletic teams were included in the data near the end of the survey as well, including men's rugby, men's baseball, women's swimming, and women's softball. The data was divided among gender, year in school (class standing), year of sport eligibility, and intercollegiate program. Results were analyzed through SAS Version 9.1 regarding similarities, differences, and notable significance. This study noted a few problematic issues that should be taken into consideration in order to further increase athlete satisfaction.

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Chapter One

Introduction

As intercollegiate athletics continue to grow, the influx of injured athletes needing athletic training assistance has become a priority at most universities. Reliable athletic training practitioners and well equipped athletic training facilities that present a positive atmosphere and work regime are a priority for any athletic program. Studies have demonstrated mixed responses to questions presented to various populations (Fisher, Unruh, 1994). These studies used questionnaires to assess athlete's perceptions of athletic trainers and athletic training programs. There was considerable speculation of the quality of athletic training facilities and services rendered. This speculation prompted the researcher to identify factors that relate to athlete's perceptions of selected NAIA athletic training programs and its athletic trainers.

Statement of the Problem

The purpose of this study was to obtain a better assessment of how intercollegiate athletes in selected NAIA athletic programs perceived their athletic training facilities and services rendered. In doing so, the author was able to analyze institutional programs and make suggestions regarding changes, allowing athletic trainers to better serve their athletes needs.

Review of Literature

Athletes' perceptions of athletic training programs and services rendered, fluctuates from study to study. Each individual athletic training program or clinic incorporates its own methods of standardized treatment for specific patients. The wide array of methods used in each athletic training program influences each athletic trainer in

response to what the specific program dictates, thus incorporating much diversity in the field of athletic training. Most, if not all research regarding athletic training programs focuses on rules and regulations set by the National Athletic Training Association (NATA). Guidelines suggest that each student athlete, without consideration for sport, gender, or level of competition, shall have equitable access to appropriate medical care, which should be directed by a college or university appointed team physician working in conjunction with a certified athletic trainer (NATA, 2003). The NATA's primary mission is to offer care for the injured athletes by training quality certified athletic trainers (Unruh, 1996). These findings are taken into consideration and implemented by all respective athletic training programs.

Athletic trainers work in several different settings including collegiate athletic training facilities, high school facilities, rehabilitation centers, and athletic training clinics. Research has shown that in each setting, the conduct of athletic trainers varies in response to the treatment population (Fisher and Hoisington, 1993). In general, treatment can be effective in any setting. The environment, however in every setting must be pleasing for an injured student athlete in order to warrant a timely, and effective rehabilitation protocol.

In a study done by Kahanov and Fairchild in 1994, discrepancies in perceptions held by injured athletes and athletic trainers during injury evaluation were assessed. Results illustrated that each athlete has a specific set of concerns related to his/her athletic participation and objectives. These concerns, in conjunction with the athlete's background, experience, mental perspective, and emotional state, determine the athlete's frame of reference. The athletic trainer must take these individual differences into

account when working with the athlete. Thus, an effective, positive environment fosters a professional atmosphere, offers convenience and accessibility, minimal distractions, a helpful, friendly staff, comfort, and purpose. In 1993, Fisher, Mullins and Frye, found that 178 (95%) of certified athletic trainers, (ATCs) he surveyed rated convenience and accessibility as a priority in a working setting. In a previous study, Fisher and Hoisington (1993) revealed that athletes viewed accessibility and convenience of facilities even more important than did ATCs.

Several studies indicated that comfort was a major contributor for athletic training facilities to acknowledge. In his 1993 article, Fisher et al. presented data indicating that a substantial percentage of athletes (74%) indicated that crowded athletic training rooms reduce attendance during rehabilitation times. Fifty six percent of ATCs agreed that crowded conditions hinder attendance, and 43% indicated that rehabilitation efforts were reduced.

Crowding in athletic training rooms is a problem that most facilities come across every day. Even with properly scheduling patients for rehabilitation, there are always emergency visits from distressed injured athletes. The more crowded an athletic training facility turns into, the harder it becomes to maintain a professional setting. This brings up an important question. Should athletic training rooms be conducted as a businesslike setting? Fisher and Hoisington (1993) found that neither athletes nor ATCs in their study judged that a businesslike setting is a training room necessity. Some athletic training programs can acquire somewhat of a businesslike atmosphere through management organization and effective leadership roles. However, it becomes impossible to control the actions of every athlete who enters a training facility. This is especially true during

fall seasons when facilities have to accompany several high maintenance teams such as football, soccer, volleyball, and pre-season baseball and basketball. The amount of athletes being treated as well as the amount of athletic trainers working and the constant traffic of everyone together can account for a hectic atmosphere. This is why it is important to run a controllable, comfortable environment, rather than a businesslike athletic training facility. Providing a comfortable atmosphere for athletes helps to increase attendance rates in rehabilitation situations (Fisher and Hoisington, 1993).

Literature and studies regarding athletes' perceptions toward student athletic trainers has been relatively positive. Nellis (1994) indicated that all athletic trainers must establish a set of values for their athletic training domain, which they should not allow to be violated. Within these values, student athletic trainers should strive to be confident, approachable, professional, caring, understanding and knowledgeable regarding their trainer/athlete relationship. By forming this student athletic trainer/athlete relationship, the student athletic trainer helps to ensure good communication lines and a greater adherence rate for rehabilitation (Unruh, 1998). Kahanov (1994) further supports the value of the student athletic trainer/athlete relationship in her study where she found that there was significant disagreement between the Student Athletic Trainer (SAT), and the athlete regarding the comfort and motivation levels athletes felt in response to SATs efforts. Both of these factors were indicated to be related to communication levels. Kahanov (1994) went on to state that it is the student athletic trainers responsibility to ensure that the athlete understands all aspects of their injuries and the rehabilitation. This type of communication is critical due to the amount of problems which may come about

from the athlete not understanding what the student athletic trainer intends to accomplish with rehabilitation.

In 1997, Moulton, Molstad, and Turner surveyed the roles of athletic trainers in collegiate athletics and found that athletic trainers felt that their roles went beyond the care and prevention of athletic injuries. Athletic trainers typically spend extended periods of time with athletes under conditions that promote personal interaction and trust, and found that they are professionally in a position to provide psychological needs, including counseling for their injured athletes. This requires knowledge with recognizing the psychological signs and symptoms that occur with athletic injury, practicing effective communication skills, and providing athletes with injury prevention education in relation to athletic injury. This study was supported by the NATA Board of Certifications definition of the role of an athletic trainer as having to go beyond the prevention and care of athletic injuries needs and requests, including counseling of the injured (National Athletic Trainers' Association Board of Certification, 1990).

Larson, Starkey, and Zaichkowsky (1996) studied the psychological aspects of athletic injuries perceived by athletic trainers. Athletic trainers observed a variety of traits in athletes who do not cope well with an athletic injury. These traits included non-compliance with the treatment/rehabilitation program: apathy, depression, feelings of hopelessness or indifference, or self-pity; no motivation, laziness, poor effort with rehabilitation; blaming others or using the injury as an excuse for aggressive behavior, and withdrawing from the team or other introverted behavior. The top five intervention techniques used by athletic trainers in their work with injured athletes were, keeping the athlete involved with the team, the use of short-term goals; encouraging positive self-

thoughts; creating variety in rehabilitation exercises; and encouraging effective communication skills. Athletic trainers reported that learning these skills enhanced their work with injured athletes.

When studying athletic injury rehabilitation, Hedgpeth and Sowa (1998) found that athletic trainers need to incorporate stress management into their rehabilitation process in order to help injured athletes improve recovery time. They believe that it is important athletic trainers be knowledgeable in the psychological aspects of injury, as well as in the psychological and physical techniques necessary to address them. This article is an example of going beyond the prevention and care of athletic injuries, which every good athletic trainer has to do every day.

Fisher (1993) reported that 100% of his subjects who were student athletic trainers indicated that good rapport between themselves and injured athletes are essential in getting the athlete to commit to their rehabilitation programs. He also indicated that 32(89%) of the athletes surveyed agreed with the student athletic trainers in that good rapport and communication skills are essential for rehabilitation adherence. Nellis (1994) stated that communication must occur horizontally as well as vertically, including every individual in the program. The author further indicates that the first step in developing a communication network is to create a vision of what your athletic training facility is to stand for, whom it will serve, and what will constitute its mission.

Athletes who engage in different sports have exhibited different perceptions of athletic trainers. Unruh (1996) revealed a significant statistical difference between the cumulative mean perception scores of athletes who compete in high profile sports and athletes who competed in low profile sports. Athletes of high profile sports demonstrated

a higher cumulative perception score than did the athletes of low profile sports. Thus, athletes who participated in high profile sports were more favorable of their athletic trainers than athletes in low profile sports. Male athletes who competed in football, basketball, or baseball and female athletes who played basketball were classified as participating in high-profile sports. All other athletes were grouped in the low-profile category.

Gender was an issue that appeared frequently throughout articles. Unruh (1998) revealed a significant difference in cumulative mean scores between male and female athletes. The mean score for males was higher than that of females. Therefore male athletes viewed their athletic trainers more favorably than did female athlete. Fisher (1993) studied 187 student athletic trainers, consisting of 100 males and 87 females. He found that there was no significant difference between gender and their perceptions toward their injured athlete's rehabilitation adherence rates. In a follow up study, Fisher found no significant difference in gender perceptions by injured athletes either.

Nellis (1994) presented text that indicated that the best place to begin leadership is with yourself. This will allow self-confidence in those skill domains in which you are proficient. Nellis (1994) also presented information regarding professionalism, management skills, leadership, and the organization of your athletic training room as being important factors for an athletic trainer.

Duncan (1992) reviewed important educational areas for student athletic trainers. These areas addressed methods for SAT's to become more familiar with in order to provide quality treatment with confidence in their skills. Qualities reviewed included an increased emphasis on evaluation skills, rehabilitation and the reconditioning of athletic

injuries, prevention of athletic injuries, and increased practical experiences through field work and internship opportunities. Student athletic trainers who are confident in their skills and behaviors have a greater chance of injured athletes adhering to their programs. Curtis (1998) found that confidence building behaviors such as positive responses to students during clinical performance, and supportive behaviors increase their willingness to assist students with clinical and non-clinical aspects of their education

Knowledge is an important quality that definitely accounts for student athletes overall perceptions of their athletic trainers' skills. Fisher (1993) revealed in a study regarding injured athlete's attitudes toward their athletic trainers and rehabilitation, which trainers needed to acquire more knowledge in the area. Often times it is difficult to place an injured athlete with a quality certified student athletic trainer, especially in an intercollegiate facility. Thus, there will be times when the student athletic trainers will not identify the suspected injury at hand. This is why student athletic trainers are closely supervised by more knowledgeable Certified Athletic Trainers (ATC's). In doing so, the ATC can teach their students how to accurately assess the magnitude of an injury. Nellis (1994) accurately measures that an athletic trainer who is knowledgeable and proficient in both leadership and management skills will maintain a highly effective and efficient athletic training room.

In February 1998, the NATA created a group of individuals who gathered data establishing the Appropriate Medical Coverage for Intercollegiate Athletics (AMCIA). They addressed issues regarding the increased exposure of student-athletes to injury from the expansion of traditional seasons, non-traditional season practices and competitions, skill instruction sessions, and year-round strength and conditioning. Their mission was to

establish recommendations for appropriate medical coverage to assist institutions in providing the best possible health care for all intercollegiate student-athletes without discrimination. In May 2003, the NATA revised their initial data material with material collected by John W. Powell, PhD, ATC, from Michigan State University. He conducted a two year study which tracked injury rates and treatments for 50 colleges and universities across five competitive divisions. This study found two trends that are occurring in college athletics. First, sport-related lawsuits that are geared toward the health care delivery process are increasing. Secondly, there are more teams, more nontraditional seasons, and more strength and conditioning sessions. This in turn, incorporates more events, more practices, and more workouts at which injuries can occur.

NATA has developed a system that allows colleges and universities to quantify the amount of medical coverage they need. The system includes a number of variables known to affect the likelihood of injury, the severity of injury, the amount of care required for that injury, and other factors affecting health care professionals' time. Existing data and professional experience are used to assign weightings to each of these variables. The system then tells a university how much coverage ("health care units") it should provide. Items considered when creating this system were injury rates for both time loss and non-time loss injury, time required for treatment and rehabilitation of these injuries, potential for injury based on number of exposures over the length of season, travel requirements, onsite coverage needs and administrative demands placed on the athletic health care staff. Each sport was assigned a base Health Care Index (HCI). The base HCI for each sport falls in the range of 1-4 units and institutions can adjust these numbers as their own injury risk and treatment data. Higher HCI indexes were reported

for women's basketball with a score of 4.0, men's soccer (3.6), football (3.1), women's gymnastics (4.0), and women's volleyball (3.5). NATA data has suggested that one certified athletic trainer can only manage so much in a given year. Therefore, one full-time certified athletic trainer may be responsible for approximately 12 health care units, which should be considered a starting point for each institution. For example, if after applying the system a college or university has 35 total health care units (which are measured in this study) then that institution should have the equivalent of approximately 3 full-time certified athletic trainers. The base health care index is founded on the injury risk (IR), and treatment demands associated with those injuries (Tx/I), as the means to determine the base health care needs for each sport. Aggregate injury rate and treatment data reflecting both time loss and non-time loss injuries comprised the IR and Tx/I, with values representing rates per 1,000 athletic exposures (or opportunity for injury).

The Injury Rate (IR) reported for each sport is based on available multi-year sport injury surveillance data. Injury rate is defined as the number of athletic injuries per 1,000 exposures resulting from both time loss and non-time loss injuries. Treatments/Injury (Tx/I) is intended to characterize each sport on the basis of time devoted to the ongoing treatment and rehabilitation of the injured student-athlete. This value provides as estimate of the volume of care that is required to manage injuries on an ongoing basis and to restore an athlete to full activity after time loss injury. To determine an index of total health care load, IR and Tx/I indices were multiplied to provide an estimate of the relative workload for that sport. Each value was then normalized to a relative 4-point scale, with 0 representing no risk/demand and 4 representing the highest risk/demand. To determine the maximum risk (value of 4), the IR*Tx/I recorded for each sport was

divided by the highest IR*Tx/I recorded for any one sport where sufficient representative data was available. For example;

$$\frac{\text{Aggregate IR*Tx/I}}{528\ (= \text{max IR*Tx/I recorded})}\ (\text{x } 4) = \text{Base Health Care Index/Sport}$$

Additional factors need to be factored into each HCI as well, including total athletes per sport team, travel, administrative duties, the number and location of full-service athletic training facilities, location of practice and competition venues, and geographic locale may either reduce or increase health care demands. Institutions should consider these factors and make appropriate adjustments in the total health care load. Table 1 demonstrates a sample worksheet of how institutions should measure and graph their base health care index.

Table 1. Sample Worksheet- Adjustments to Base Health Care Index

A	B	C	D	E	F	G	H	I	J	K
Sport	Base HCI	# Days/ Season	# Athletes/ Team	Total Athl Exposure	Exposure Modify	Adjusted HCI (B*F)	% of Year	Adjusted HCI/Yr	Travel (20 days= 1 HCU)	Admin Duties
M Basket	2.4	132	15	1980	2	4.8	50%	2.4	1.5	
W Basket	4	132	15	1980	2	7.9	50%	4	1.5	
Football	3.1	120	100	12000	12	37.5	50%	18.7	0.5	
M. Soccer	3.6	132	30	3960	4	11.2	50%	5.6	1	
W. Soccer	2.8	132	30	3960	4	14.2	50%	7.1	1	
W. Volley	3.5	132	15	1980	2	7	50%	3.5	1	
TOTALS								41.3	6.5	

TOTAL HEALTH CARE UNITS	47.8
TOTAL FULL TIME ATCs (Total Health Care Units) / 12	3.98

* Data represents the total number of allowable practice days for both in and out of season for NCAA Division I. Individual institutional values should be adjusted based on competitive level and the extent of both traditional season activities.

These NATA guidelines were an effort to capture what is known about appropriate medical coverage and make it useful and easily available across the collegiate universe. Thus is a significant step forward for student-athletes and their colleges and universities (NATA, 2003). Many administrators in athletic departments are missing these facts and continuing to rely only on the athletic training staff that they have. They most likely don't even know that these guidelines exist. Athletic trainers at each institution need to bring these issues to the attention of their athletic directors. Without these guidelines, staff burnout can occur and may unfortunately have a negative affect on their student athletes, especially in institutions whom do not have student athletic trainers.

Resources and staffing demands were researched by Staurowsky and Scriber in 1998. They surveyed 153 certified athletic trainers and illustrated the demands and expectations placed upon them relative to their workloads, elements of compensation such as salary and benefits, and performance evaluation criteria in accredited athletic training programs. One hundred nineteen (78%) of these athletic trainers worked on staffs of 3 or more certified athletic trainers, and 85 (56%) were on staffs of 4 or more certified athletic trainers and still managed to work more than 55 to 60 hours each week. Not only were these athletic trainers assisting and providing care for their student athletes, they had other responsibilities including organizing and conducting examinations for teaching classes, administrative responsibilities, purchasing supplies, budget responsibilities, and insurance paperwork. This pattern of diverse job demands combined with long work hours parallels the conditions associated with athletic trainer burnout (Capel, 1990). According to Rohland (1998), as a precautionary measure, institutional decision makers (provosts, deans, department chairs, athletic directors) and athletic trainers may wish to re-examine workloads to reduce the level of physical and emotional stress experienced by athletic trainers.

When researching athletic training students in the college/university setting and the scope of clinical education, Weidner, Noble, and Pipkin (2006) found that certified athletic trainers who are clinical instructors are having an increasingly difficult time adjusting to the extra responsibility for teaching student athletic trainers. Increased workloads to provide medical care coverage for expanding season conditioning, practices, and competition schedules are challenging to cover, especially with fewer resources in every area. Injured athletes, as well as student athletic trainers may not be

receiving appropriate training and care due to time constraints. Weidner et al., suggests that either more staffing needs to be introduced into athletic training programs, or fewer student athletic trainers need to be accepted into the athletic training program to better serve everyone.

Pitney, Ilsley, and Rintala (2002) studied the professional socialization of certified athletic trainers in the NCAA and found evidence of role strain in that the bulk of participants in the study suggested that they were often overwhelmed, lacked an understanding of exactly how tasks should be completed in the "new NATA accredited system," and were astonished by the high volume of work. Further evidence reported by Capel (1986) found that burnout among athletic trainers was indicative of various sources of life stress, such as extensive time commitment, low salary, limited opportunity for career advancement, poor working conditions, job dissatisfaction, and conflicts with coworkers. Campbell et al., (1985) backed up Capel's study, reporting that approximately 40% of all athletic trainers they surveyed were suffering from stress and burnout.

When surveying athletic trainers in order to gain a better understanding of how they perceived their professional roles, Pitney et al., (2002) found that most participants stated that their original mission was to provide the best possible health care. However, one participant eventually learned other aspects were necessary for success as well. This athletic trainer said "I think that the student athletes rely on us in several different areas…academically and emotionally…because athletic trainers are a non-threatening group. You know we are not their peers, we are not competing against them for a position on the team, and we are not their coaches to whom they have to prove something

or be perfect in their area. We are not their teachers, and we're not the administration. We're not the media. They can sort of let their guard down when we are in their company and…they rely…on you a lot more than for their physical ailments, and I probably didn't realize I was going to be a friend and a mother to them when I first started my job." Athletic trainers in this study realized soon after they entered the athletic training realm, that their role included far more than health care for athletic-related injuries and technical aspects of the job. It appeared that they became increasingly connected with and committed to their patients.

Purpose Statement

The purpose of this study was to obtain a better assessment of how intercollegiate athletes in selected NAIA athletic programs perceived their athletic training facilities and services rendered. In doing so, the authors will be able to analyze institutional programs and make suggestions regarding changes which will better serve their athletes needs.

Operational Definitions

Perceptions. Attitudes and views of intercollegiate athletes towards the athletic training room and the athletic trainers.

Certified athletic trainer. Person who has passed the National Athletic Trainers' Association Board of Certification (NATABOC) examination and earned the title certified athletic trainer (ATC). The certified athletic trainer is recognized by the American Medical Association as an allied health professional.

Assumptions

It was assumed that all participants answered all questions honestly and to the best of their ability. The questionnaire used was a valid and reliable tool for measuring the perceptions that student athletes have regarding their athletic training program.

Hypothesis

The researchers believed that intercollegiate athletes in selected NAIA programs have mixed perceptions of each athletic training facility and their athletic trainers due to:

1. More athletic training staff members increases student athlete's perceptions of their athletic training program.

2. Better Facilities at each school helps to promote higher perceptions.

3. The more available athletic trainers are at each institution increases athletes perceptions of their athletic training program.

4. The higher an institutions budget at each individual institution affects student athlete's perceptions.

5. The more certified athletic trainers at each individual institution increase student athlete perceptions.

6. Student athletic trainers will help to make athletic training programs more efficient.

Limitations

The following limitations are noted as they may have affected the outcome of this study:

1. The athletes may not have been completely honest when answering the questions due to concerns that the results may be viewed by their coaches and trainers.

2. Experience of athletic trainers within athletic training programs is variable.

3. There is a variation of in skills and knowledge of the selected NAIA athletic training room staff.

4. Number of athletic trainers at each institution.

Delimitations

The following delimitations are noted as they may have affected the outcome of this study:

1. The authors used seven sports including Women's Volleyball, Men's and Women's Soccer, and Men's and Women's Basketball, Men's Baseball, Men's Rugby, Women's Swimming and Women's Softball (seven total teams).

2. Intercollegiate teams only were assessed. Club sports and the general population were not a part of this study.

3. Selected NAIA intercollegiate programs in the Golden State Athletic Conference (GSAC) and the California Pacific Athletic Conference (Cal Pac) were surveyed. Two athletic programs from the California Conference Athletic Association (CCAA) were surveyed to compare and contrast results.

Significance of Study

The significance of this study was that it will help athletic training programs in the NAIA to assess their practices and procedures in order to improve the quality of coverage and care they provide.

Chapter Two

Method

Subjects. Between October 2006 and November 2006 student athletes at 11 schools within the National Association of Intercollegiate Athletics (NAIA) and 2 institutions within the California Conference Athletic Association (CCAA) were surveyed regarding their perceptions of their athletic training and the services provided by their institutions. The results were compared among schools with Certified Athletic Trainers (ATC's) and those without.

Questionnaire. The researchers developed a questionnaire to assess student athlete's perceptions regarding athletic training and services rendered at their institution. Following the human subjects approval, the researcher made phone calls, emails and visited 19 California National Association of Intercollegiate Athletics (NAIA) Institutions and their athletic training staff. Certified Athletic Trainers (ATC's) at each school were asked in advance by the researcher to proctor the study to the designated teams at their institution. Five preaddressed packets contained writing utensils, consent forms, preaddressed return envelopes, 20 surveys for each team (n=100), and a proctor directional sheet. Upon arrival of their packets, the proctor was instructed to ask permission from the coaches of each team for his or her team to take the survey at the beginning or end of a practice. After permission was granted and a time was scheduled, the proctor was instructed to read out loud the directions as to how to fill out the survey at each team meeting. Each student athlete was directed to read, sign and date a consent form. The proctors were also asked to inform each student that their participation was entirely voluntary and anonymous. They were asked not to put their name or any

revealing marks on their survey. Student athletes were asked not to participate if they were under the age of 18 or if they had never used the athletic training room or services of an athletic trainer. (answered "no" to question 7). After the student athlete finished filling out the survey, they were instructed to bring their survey up and place it personally into the preaddressed return envelope. After all of the surveys were turned in, the proctor was instructed to seal the preaddressed envelope and mail it out promptly.

Each survey took place during a team meeting at each team's institution between October 10, 2006 and November 20, 2006. After only receiving a fraction of surveys, a second and third set of phone calls and emails were sent out to each athletic trainer who was responsible for proctoring their institutions surveys. Some of the institutions did not have all of the main six sports at their institution and asked if they could send in surveys from a different sport. The researchers then decided to accept different sport teams, other than those originally planned to be surveyed. These teams included women's swimming, women's softball, men's rugby, and men's baseball. Two of the institutions not belonging to the NAIA were surveyed. When research began for this survey, Notre Dame de Namur University (NDNU) was part of the NAIA. However, in the year that has passed, the institution became part of the California Conference Athletic Association (CCAA) and is in its exploratory year in that conference. Thus, NDNU was included as part of the NAIA because nothing had changed in the schools athletic program except for the expected conference change. Humboldt State University (HSU) was included into the data as well. HSU is also part of the CCAA and would give the researchers an institution to compare and contrast with selected NAIA institutions. As a graduate student at HSU, the instructor had previously done a pilot study on this same topic, solely at HSU. The

researchers would be able to use the previous results at HSU to expand comparisons and results in this study. Questionnaires were mailed to 11 National Association of Intercollegiate Athletics (NAIA) and two California Conference Athletic Association (CCAA) intercollegiate athletic programs in California. These institutions included Azusa Pacific (an accredited athletic training program), Bethany College, College of Maritime Academy, Concordia University, California State University East Bay, Dominican University, Fresno Pacific University, Holy Names University, Menlo College, Simpson College, and Vanguard University. Notre Dame de Namur University (NDNU) and Humboldt State University (HSU), (an accredited athletic training program) were included in this study as CCAA programs.

A total of 1,900 individual surveys were mailed to 19 separate intercollegiate athletic programs. After all the surveys were returned, a total survey return rate of 29.6% was acquired by the researchers on February 10, 2007, (see figure 1). Overall, 562 surveys were filled out and returned.

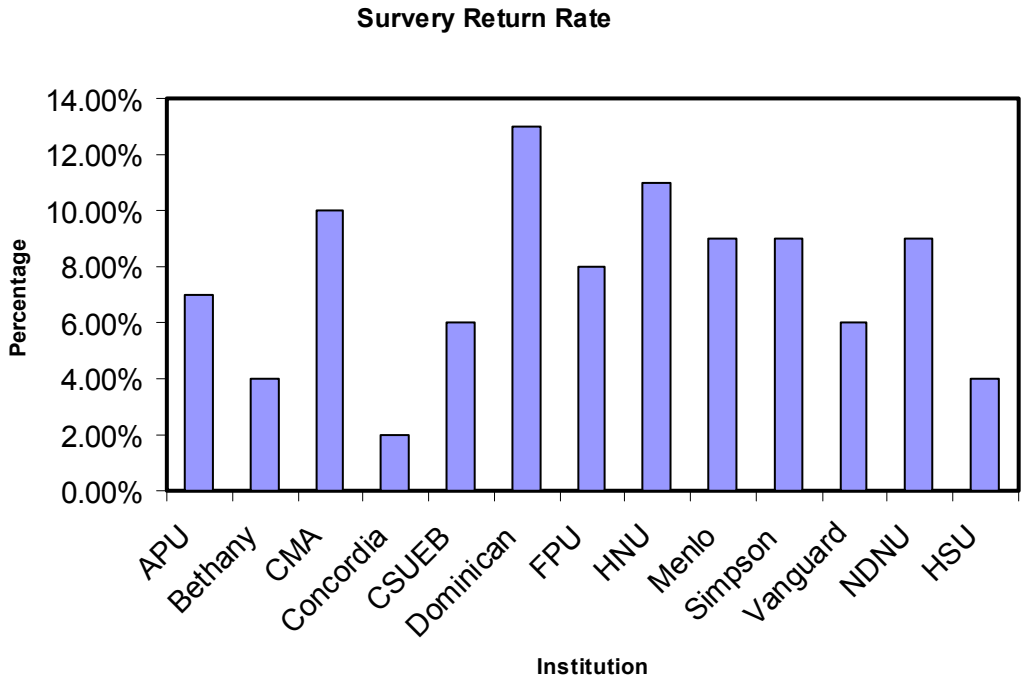

Figure 1. The Survey Return Rates for 13 selected NAIA and CCAA Institutions.

The researchers developed a questionnaire organized into two sections (Appendix A). The initial section was composed of demographic informational questions. Questions included gender, age, institution attended, year in school, year of sport eligibility, sport played, usage of athletic training facility or services rendered, and whether or not their school has a student athletic training program. The second section was arranged into 26 statements designed to assess the perceptions of student athletes concerning their athletic training staff and services rendered. Six domains measuring different aspects of athletic training were constructed. These areas included environment in the athletic training room, knowledge of the athletic training staff, communication, organization and management, resources, and adequate staff for coverage of events. All 26 statements were answered and scored with a 5 point Likert Scale ranging from one representing strongly disagree, to five representing strongly agree with 3 signifying

neutral. Non-applicable was a valid response for all questions. Participants were to choose only one number for each statement. Each of the 24 questionnaire statements were grouped accordingly to measure six aspects of athletic training. Scales were created by summing grouped items, with higher scores representing more agreement. Estimated time to take the survey was 5-7 minutes.

The purpose of this study was to obtain a better assessment of how intercollegiate athletes in selected NAIA athletic programs perceived their athletic training facilities and services rendered. Six domains were surveyed and analyzed within this survey. These domains include environment, knowledge, communication, organization and management, resources, and staffing. These elements were chosen because they are highly compatible with the recommended guidelines set forth by the National Athletic Training Association (NATA, 2007).

Statistical Analysis

Frequency distributions and descriptive statistics are presented on the demographic information (gender, age, institution attended, year in school, year of sport eligibility, sport played, whether or not they have used the services of their athletic training program, and if they have student athletic trainers or not). Humboldt State University was removed from the primary analysis and calculated separately when computing the distribution ranges in each domain. Differences in demographic variables (gender, year in school, and whether or not they used student athletic trainers) were measured by using a chi-square test.

Due to the moderate skew in the scales, nonparametric procedures were used when testing for differences in the domains. A Mann-Whitney test was used to compare

differences in the scales between gender and absence or presence of student athletic trainers. Kruskall-Wallis tests were used to test for differences in year of school and how they perceived their athletic training programs environment, knowledge of the staff, communication, organization and management, whether or not they had an adequate amount of staff members whom were able to cover events, and their resources.

While collecting and summarizing data, the researchers found that several students did not answer one or more of the statements on the questionnaire. If a respondent answered less than 50% of the questions in a certain domain, that person was scored as missing on that domain. However, if the respondent responded to more than 50% of the questions in a particular domain, the missing questions were imputed by assigning the mean score from the other items in that domain. Respondents who answered not applicable to a question were treated as missing for that question. All analyses were conducted in Excel and SAS Version 9.1.

Chapter Three

Results

Five hundred and sixty two student athletes completed the questionnaire. Fifty-five percent were female and 45% were male. Ages of respondents ranged from 18 years of age up to 26 years of age, with an average age of 19.9 years (See Table 2).

Table 2. Survey Participation Demographics

	N	%
Gender		
Male	255	45
Female	307	55
Year in School		
Freshman	141	25
Sophomore	154	27
Junior	147	26
Senior	120	21
Age		
18 years	126	22
19 years	127	23
20 years	125	22
21 years	101	18
22 years	49	9
23 + Years		
23 years	19	3
24 years	9	2
25 years	4	1
26 years	2	<1
Student Trainers		
Yes	206	37
No	356	63

Sport Participation		
W. Volleyball	97	17
M. Soccer	110	20
W. Soccer	110	20
M. Basketball	102	18
W. Basketball	80	14
W. Swimming	6	1
M. Rugby	23	4
M. Baseball	20	4
W. Softball	14	3
NAIA vs. CCAA		
HSU	24	4
NAIA schools	538	96

Student athletes who were in their sophomore year of school had the highest response rate (27%), while seniors had the lowest (21%) (See Table 2). Student athletes in their freshman year of eligibility had a 30% response while senior eligibility had 17%. Sophomores and juniors fell into the middle percentile with 27% and 25% (See Table 2).

Nine sports were assessed, with Men's and Women's Soccer having the highest return response rate with 20% from each team. The remaining sports had response rates ranging from 1% (women's swimming) to 18% (men's basketball) (See Table 2).

Athletes were asked if their athletic program had student athletic trainers. Sixty-three percent of athletic programs reported not having student athletic trainers, while 37% of institutions reported having a student athletic training program (See Table 2).

A well balanced, positive environment is important in every athletic training program. Questionnaire statements 10 (The athletic trainers at my institution conduct themselves in a professional manner) and 11 (I feel the environment within my athletic training room creates a positive atmosphere) were summed together in order to measure how student athletes viewed the environment in their athletic training facility. The scale

ranged from 2 to 10 with a standardized Cronbach alpha of 0.76, indicating a good degree of reliability (see Table 3).

Table 3. Environmental Scale

Environmental Scale		
Score	Frequency	Percent
2	3	0.57
3	1	0.19
4	4	0.77
5	7	1.34
6	12	2.3
7	31	5.94
8	81	15.13
9	75	12.84
10	329	60.92
	16 Missing	

Knowledge in an athletic training staff is extremely important due to several factors. Five questionnaire statements were summed together in order to measure the knowledge of their athletic training staff. These included statements 16 (I am satisfied with the quality of care provided by my athletic trainer), 17 (I feel confident with the knowledge demonstrated by my athletic trainer regarding my injuries), 25 (My athletic trainer provides me with the information I need to prevent re-injury after sustaining an initial injury), 29 (I am satisfied with the assessment process my athletic trainer uses to evaluate my injury, and statement 31 (All of the athletic trainers trust one another to properly assist me as an athlete). The scale ranged from 5 to 25 with a standardized Cronbach alpha of 0.89, indicating very good reliability (see Table 4).

Table 4. Knowledge Scale

Knowledge Scale		
Score	Frequency	Percent
5	2	0.4
9	2	0.4
12	2	0.4
13	4	0.7
14	7	1.3
15	5	1
16	4	1
17	9	1.7
18	10	1.8
19	18	3.3
20	56	10.1
21	53	9.7
22	30	5.5
23	55	10.1
24	65	11.9
25	223	40.9
	17 Missing	

Communication occurs on many different planes in order to make an athletic training program run smoothly. Communication must occur between staff athletic trainers, between certified athletic trainers (ATC's) and student athletes, as well as between ATC's, coaches and team physicians. Six variables were analyzed in order to properly assess the observed level of communication in each student athletes' athletic training programs. Statements 19, 21, 27, 28, 30, and 32 were analyzed together and had a significant Cronbach Alpha of 0.87, with a scale rang from 6 to 30 (see Table 5).

Table 5. Communication Scale

Communication Scale		
Score	Frequency	Percent
6	1	0.18
8	1	0.18
14	2	0.37
15	2	0.37
16	1	0.18
17	5	0.92
18	3	0.55
19	2	0.37
20	6	1.1
21	7	1.29
22	13	2.39
23	23	4.23
24	51	9.38
25	29	5.33
26	49	9.01
27	53	9.74
28	61	11.21
29	59	10.85
30	176	32.35
	18 Missing	

Organization and Management deal with many different aspects in an athletic training program, some of which occur behind doors where student athletes may or may not see. However there are many aspects in this area which do present themselves out in the open such as professionalism, comfort in the training facility, how many athletic trainers are available for assistance for each team, or whether or not the facility is open to student athletes frequently in order to get proper care and assistance. These aspects have been measured by combining statements 18 (My athletic trainers' method for proper rehabilitation of athletic injuries is ideal) and 33 (I am satisfied with the training room hours of availability to athletes prior to practice or competition) together in order to assess student athletes perceived organization and management in their athletic training

programs. The resulting scale ranged from 2 to 10 with a standardized Cronbach alpha of 0.60 (see Table 6).

Table 6. Organization and Management Scale

Organizational Scores		
Score	Frequency	Percent
2	3	0.57
3	3	0.57
4	3	0.57
5	12	2.29
6	30	5.71
7	62	11.81
8	104	19.81
9	107	20.38
10	201	38.29
	37 Missing	

NATA guidelines state that a certified athletic trainer must be present at all intercollegiate games. These same guidelines also indicate that an athletic trainer or first aid responder (usually the same person) should be within 4-6 minutes at most from a practice, game, or event in case a life threatening injury occurs. Resources are things that help equip athletic training programs such as materials for rehabilitation, medical supplies, the amount of money that is spent of staff salaries, and education. These factors were measured by grouping together questionnaire statements 12, 13, 22, 24, and 26 (See Appendix A). A scale range was calculated and ranged from 5 to 25 with a standardized Cronbach alpha score of 0.73 (see Table 7).

Table 7. Resource Scale

Resource Scale		
Score	Frequency	Percent
5	1	0.18
9	1	0.18
10	1	0.18
11	2	0.36
12	1	0.18
13	1	0.18
14	3	0.54
15	7	1.26
16	11	1.98
17	14	2.52
18	31	5.59
19	34	6.13
20	59	10.63
21	63	11.35
22	53	9.55
23	58	10.45
24	75	13.51
25	140	25.23
	7 Missing	

Four questionnaire statements were analyzed (statements 14, 15, 20, and 23) (See Appendix A) when measuring how student athletes perceived whether or not their athletic training programs had adequate staffing and coverage. The resulting scale ranged from 4 to 20 with a standardized Cronbach alpha of 0.62 (see Table 8).

Table 8. Adequate Staff Coverage Scale

Staff Scale		
Score	Frequency	Percent
4	1	0.19
7	3	0.56
8	3	0.56
9	4	0.74
10	9	1.67
11	15	2.78
12	38	7.04
13	19	3.52
14	30	5.56
15	47	8.7
16	53	9.81
17	49	9.07
18	55	10.19
19	68	12.59
20	146	27.04
	22 Missing	

Statement 9 (The athletic training room and its staff are essential in intercollegiate athletics) was broken down into five different categorical scores; strongly agree, agree, neutral (or, not applicable), disagree, and strongly disagree (see Table 9).

Table 9. Likert Scale for Statement 9

Likert Scale for Statement 9		
Score	Frequency	Percent
Strongly Disagree	4	0.71
Disagree	1	0.18
Neutral	14	2.5
Agree	67	11.94
Strongly Agree	475	84.67
	1 Missing	

Statement 34 (Overall, I am satisfied with the athletic training services) was also broken down into five categorical scores; strongly agree, agree, neutral (or, not applicable), disagree, and strongly disagree (see Table 10).

Table 10. Likert Scale for Statement 34

Likert Scale for Statement 34

Score	Frequency	Percent
Strongly Disagree	4	0.73
Disagree	11	2.01
Neutral	55	10.05
Agree	136	24.86
Strongly Agree	341	62.34
	15 Missing	

Table 11 describes differences between selected NAIA athletic programs with and without student athletic trainers (SAT's) and students perceptions about the 6 domains related to student athletic trainers. Programs with SATs scored significantly higher on every domain. There was no difference between programs with SATs and student athletes' responses to question 9 (how essential the athletic training room and staff are in intercollegiate athletics). However, there was a statistically significant difference in question 34, overall satisfaction with the athletic training services, with programs with SATs scoring much higher.

Table 11. Difference between Student Athletes With and Without Student Athletic Trainers

Domain	Mean Rank Score		P-Value
	SAT	No SAT	
Environment	310.30	236.47	<0.0001
Knowledge	298.72	242.57	<0.0001
Communication	297.78	242.56	<0.0001
Organization/Management	313.01	223.10	<0.0001
Resources	333.26	231.51	<0.0001
Staff/Coverage	329.76	224.81	<0.0001
Statement 9	276.66	265.11	0.200
Statement 34	315.28	236.05	<0.0001

Table 12 presents the difference in domains between student athletes based on their year in school. Freshman typically scored the higher on all domains, followed by sophomores. There was a marginally significant difference between year and school in the environmental domain. There was also a significant difference in question 34 (overall satisfaction with athletic training services) among students in different school years, with freshmen scoring the highest.

Table 12. Differences in Domains between Students Based on Year in School

	Mean Rank Score				
Domain	Freshman	Sophomore	Junior	Senior	P-Value
Environment	284.74	265.48	243.67	250.18	0.0602
Knowledge	278.99	259.46	257.76	249.32	0.4309
Communication	278.33	260.19	254.85	250.49	0.4662
Organization	280.64	252.30	241.57	239.65	0.0888
Resources	293.86	274.45	245.56	247.22	0.0265
Staff/Coverage	287.82	270.01	234.92	244.85	0.0173
Statement 9	271.71	270.47	257.80	276.95	0.4540
Statement 34	291.82	263.13	234.92	259.98	0.0061

Table 13 details the differences in perceptions between males and females. Females scored higher on every domain. There were marginal significant differences with females scoring higher in the knowledge and resources domains. However, there was a statistically significant difference in statement 9 (how essential the athletic training room and staff are in intercollegiate athletics).

Table 13. Mean Rank Scores and P-Values in Domains between Gender

Domain	Female	Male	P-Vale
Environment	266.72	255.18	0.3209
Knowledge	272.11	248.54	0.0650
Communication	271.01	248.64	0.0856
Organization	257.07	249.18	0.5305
Resources	277.09	252.55	0.0635
Staff/Coverage	262.65	256.82	0.6553
Statement 9	279.12	256.76	0.0091
Statement 34	258.07	267.99	0.3892

Table 14 represents the differences between selected NAIA institutions and Humboldt State University on the 8 domains. HSU students had more favorable perceptions on all domains. There were significant differences between how student athletes at HSU and selected NAIA institutions scored the organization domain as well as the staff and coverage domain. HSU significantly scored higher in both domains. Significant differences also illustrated HSU scoring significantly higher than the selected NAIA institutions for statements 9 (The athletic training room and its staff are essential in intercollegiate athletics) and statement 34 (Overall, I am satisfied with the athletic training services).

Table 14. Mean Rank Scores and P-Vales Between Selected NAIA Institutions and Humboldt State University

Domain	NAIA	HSU	P-Value
Environment	271.86	275.38	0.9087
Knowledge	271.73	301.87	0.3507
Communication	271.02	305.96	0.2872
Organization	259.82	347.82	0.0099
Resources	276.01	322.13	0.1631
Staff/Coverage	267.06	355.60	0.0098
Statement 9	279.08	324.00	0.0334
Statement 34	271.30	335.52	0.0267

Chapter Four

Discussion

This research study was conducted to determine how intercollegiate athletes in selected NAIA athletic programs perceived their athletic training facilities and services rendered. The results of this study support the hypothesis that intercollegiate athletes in the selected NAIA institutions have mixed perceptions of each athletic training facility and their athletic trainers due to: More athletic training staffing helps to increase student athlete's perceptions of their athletic training program, better facilities at each school promotes higher student athlete perceptions, more available athletic trainers at each institution increases athletes perceptions of their athletic training program, higher budgets at each individual institution increases student athlete's perceptions, more certified athletic trainers at each individual institution helps to increase student athlete perceptions, and student athletic trainers help to make athletic training programs more efficient.

The results of this study support the findings of Fisher (1993), and his research, which has shown that in each setting, the conduct of athletic trainers varies in response to the treatment population, facility, and resources. In comparison, in 1994, Nellis found that all athletic trainers must establish a set of values for their athletic training domain, which they will not allow to be violated. Within these values, student athletic trainers should strive to be confident, approachable, professional, caring, understanding and knowledgeable regarding their trainer/athlete relationship.

Results for this study revealed that selected athletes in NAIA intercollegiate athletics who had student athletic trainers, thus more staffing, had more positive perceptions of their athletic training programs on all measured domains with the

exception of statement 9, than did student athletes who did not report having student athletic trainers at their facility. Student athletes, who reported having student athletic trainers, significantly had higher perceptions when asked to rank statement 34 (Overall, I am satisfied with the athletic training services). They also had significantly higher perceptions of how they viewed their athletic training programs environment, knowledge, communication, organization and management, resources, and their staff and coverage. These results support other studies including Unruh's study in 1998. He found that by forming student athletic trainer/athlete relationships, the student athletic trainer can help to ensure good communication lines and a greater adherence rate for rehabilitation. Fisher (1993) reported that 100% of his subjects who were student athletic trainers indicated that good rapport between themselves and injured athletes are essential in getting the athlete to commit to their rehabilitation programs. He also indicated that 32(89%) of the athletes surveyed agreed with the student athletic trainers in that good rapport and communication skills are essential for rehabilitation adherence.

When testing the differences between how student athletes perceived their athletic training programs based on their year in school, freshmen scored the highest on all domains, except for statement 9, in which seniors scored the highest. Freshman student athletes significantly had better perceptions for statement 34 (Overall, I am satisfied with the athletic training services) than did their counterparts. Freshman also had significantly higher mean rank scores than the other three grade levels when asked about their athletic training programs environment, resources, and whether or not they had adequate staff and coverage. Organization and management had moderate significance when perceived by student athletes in different years of school. Freshman had the strongest perceived level

for this domain once again. Comparative results were found in a previous study by Steeves and Childs (2002). When surveying perceptions held by student athletes at Humboldt State University, they found freshman to have the highest positive perceptions of their athletic training room as well as toward their student athletic trainers.

Gender was analyzed for this study and was found to have moderate significance when dealing with how student athletes perceived the knowledge of their athletic training staff, along with resources and communication within their athletic training programs. Females had more positive perceptions in all three domains. Unruh, (1998) revealed that he also found a significant difference in cumulative mean scores between male and female athletes. However his mean score for males was higher than that of females. Therefore male athletes viewed their athletic trainers more favorably than did female athletes. Contrasting both findings above, in 1994, Fisher found no significant difference in gender perceptions held by injured athletes. In a previous study differentiating gender in the athletic training realm, Fisher (1993) studied 187 student athletic trainers, consisting of 100 males and 87 females as well. He found that there was no significant difference between gender and their perceptions toward their injured athlete's rehabilitation adherence rates.

Research indicated in this study that females significantly acquired higher mean rank scores when asked whether or not the athletic training room and its staff were essential in intercollegiate athletics (Statement 9) than did males as well.

In order to be able to compare and contrast the selected NAIA Intercollegiate athletic training programs, Humboldt State University, who is part of the CCAA, was allowed to take the survey. It should be mentioned that Notre Dame de Namur was going

into their exploratory year, also as a part of the CCAA during this study as well. With the inclusion of HSU, the researchers were able not only to compare and contrast differences in selected NAIA programs verses the CCAA, but were able to bridge some of the results together with a previous study by the researcher at HSU (Steeves and Childs, 2002) regarding perceptions held by student athletes. Upon reviewing the scores from the current survey, it should be noted that HSU scored higher than every other school in every domain but due to a small sample size did not have enough power to see statistically significant differences.

Generally CCAA programs are large enough to carry a "full" athletic training program. This includes at least 2 certified staff athletic trainers and several student athletic trainers. In 2003, athletic training programs were either forced to have an accredited curriculum program, rather than an internship program. If they were unable to spend the extensive time and money to instill a curriculum agenda into their program, they were forced to drop all student athletic trainers. Athletic training programs with more resources and more staff willing to make the change were able to make these changes, whereas smaller institutions, such as many in the NAIA were unable to make the transformation. Today, usually only one or two staff athletic trainers work at these small institutions with no help from student athletic trainers. With a lack in staff, ATC's are expected to take on every roll in their domain causing excessive amounts of work in a hectic environment, and less than adequate time spent on the care and prevention of athletic injuries.

Within this study, results showed significant differences between selected NAIA institutions and HSU when measuring organization and staff and coverage. HSU had

exceptionally higher perceptions of the organization within their athletic training program. They also had greater perceptions regarding their staff and coverage given. These results are not surprising due to HSU having a student athletic training curriculum program allowing student athletic trainers to help out staff athletic trainers with game and practice coverage and organization within the training room. Student athletes from HSU also had significantly greater perceptions than selected NAIA student athletes surveyed when asked if their athletic training room and its staff were essential in intercollegiate athletics (Statement 9), and if they were satisfied with the athletic training services, overall (Statement 34).

Limitations of this study included the number of returned surveys compared to how many were sent out. Each survey was proctored by separate proctors, who were athletic trainers at their individual institution. Although the proctors had instructions sent to them on how to proctor each survey, some surveys had to be thrown out due to insufficient information. The honesty of athletes being surveyed was questionable due to several factors. Athletes may have thought that their athletic trainer (the proctor) would see their survey and therefore would not be as honest as they would have normally been. Experience of athletic trainers within athletic training programs was variable. The valuable knowledge of an athletic trainer who has been at an institution for several years can far outweigh an ATC who is new to their program. However, a new ATC in a program can be encouraging to student athletes as well. The number of athletic trainers at each institution is different in each program and may account for how student athletes rate statements on the questionnaire.

Limitations of the questionnaire itself included that some athletic trainers did not have time to proctor the study, and therefore an online survey given to the athletes instead of a paper survey may have been more cost-effective. Some of the statements may have been misinterpreted by some of the student athletes and they may have answered them in a different way. For instance, many student athletes' answered "not applicable" to the statement regarding being satisfied with the time lapsed from when they were injured to when they saw their team physician (Statement 21). Students may not have ever had to see a team physician, or they might not have known when they needed to see a physician.

Strengths of the questionnaire were that it measured what it was suppose to measure, demonstrating several significant differences between domain scales. It portrayed how selected NAIA athletic training programs measured up to Humboldt State's CCAA athletic training program according to student athletes. It showed areas in which athletic training programs can work to improve, including their environment, communication, knowledge, resources, organization and management, and their staffing and coverage of events.

For future research in this area, a larger scale of online questionnaires sent out nation wide to various student athletes regarding their athletic training programs would help to ensure quality research. Surveying other intercollegiate teams, as well as the teams measured in this study, might help researchers gain a better understanding of the relationship between high priority teams compared to low priority athletic teams.

Conclusions

The purpose of this study was to obtain a better assessment of how intercollegiate athletes in selected NAIA athletic programs perceived their athletic training facilities and

services rendered. By doing so, the authors were able to analyze programs and make suggestions to NAIA athletic training programs in order to improve the quality of coverage and care they provide. The results revealed that several aspects within the selected NAIA athletic training realm need to be addressed. The National Athletic Training Association (NATA) distributes a general guide each year, describing guidelines and regulations set forth by the organization. These guidelines, for the most part, help to form a quality efficient athletic training program. Many athletic trainers follow these guidelines, but just as many fail to follow them as well, due to various explanations. These aspects often deal with programs not having enough resources, staffing, school support, and/or a lack of education within athletics. Every intercollegiate athletic training program needs to follow the NATA guidelines in order to improve their quality of care to their student athletes.

Research from this survey portrayed how more NAIA institutions need to carry either more staff members, or student athletic trainers. Student athletic trainers encourage positive effects upon athletic training programs, including a more efficient environment which promotes a greater amount of communication between student athletes and their athletic trainers. SAT's promote improved athlete satisfaction, with more attention directed toward their needs. SAT's support their athletic training staff by helping to organize and manage hundreds of athletes that walk through the athletic training room on a daily basis. SAT's help with coverage of events, taping injured athletes, prevention and rehabilitation of athletic injuries, evaluation of athletic injuries, hydration, sanitary chores, and comprehensive support of athletic injuries. All of these

factors are extremely important in every athletic training program in order to run a proficient program.

In this study, freshmen had significantly higher perceptions of their athletic trainers support in most domains which can be attributed to several explanations. Freshmen are new to college and probably have not come from a high school that has a quality athletic training program. Having an athletic training staff on hand, even if it is meager, can be advantageous. Knowing that someone is there for them in time of need, whether it is due to an injury or personal support, can make freshmen feel satisfied. More so, than student athletes in different class standing, who have been at their school longer and have had more experiences and possibly more injuries than their younger teammates. More injuries tend to reduce student athlete satisfaction of their athletic training program. Equal care should be provided and recognized by all student athletes regardless of their sport, year in school, or gender.

This study reflected that females had higher perceptions of their athletic training programs resources, communication, and of their staff's knowledge than did males. This assessment may be explained by females wanting to communicate, generally more than males. This aspect alone may raise their perceptions of the intelligence of their athletic training staff.

In order to better serve student athletes, the researchers believe that the NATA needs to modify their accredited curriculum program. Smaller intercollegiate athletic training programs are having a difficult time trying to balance responsibilities between one or two certified athletic trainers for one program and are completely insufficient of NATA's recommended guidelines for appropriate medical coverage. Without the help of

student athletic trainers, too many risk factors take over an athletic training program, ending in disastrous effects. The NATA's primary mission is for athletic trainers to offer care for the injured athletes, (Unruh, 1996). If the NATA wants valuable and effective care given to all collegiate student athletes, finding a way to better equip athletic training programs will need to be considered. Weidner and Vincent found in 1992, that their study regarding the evaluation of athletic training programs designed by either academic or clinical preparation illustrated no difference in types of preparation. Both clinical as well as academic programs adequately prepare students to function as certified athletic trainers. If this study is true, why can't the NATA incorporate both forms of athletic training preparation programs instead of just the accredited form? That way, smaller schools who cannot afford to have accredited student athletic training programs can still have adequate support staff instead of only a single athletic trainer.

This research paper was designed to give a better understanding of how NAIA institutions can help their athletic training program become more successful in their essential role in intercollegiate athletics. Major factors also found within the research provided noteworthy results describing how student athletes perceive their athletic training programs much better when they have student athletic trainers compared to when they do not have student athletic trainers.

References

American Psychological Association. (1994). Publication manual of the american psychological association (4th ed.). Washington, DC: Author.

Andersen, M.B. & Williams, J.M. (1999). Athletic injury, psychosocial factors and perceptual changes during stress. *Journal of Sport Science* 735-741.

Blackwell, B. & McCullagh, P. (1990). The relationship of athletic injury to life stress, competitive anxiety, and coping resources. *International Journal of Stress Management,* 23-27.

Brewer, B.W., Jeffers, K.E., & Petitpas, A.J. (1994). Perceptions of psychological interventions in the context of sport injury rehabilitation. *The Sport Psychologist,* 176-188.

Capel, S.A. (1986). Psychological and organizational factors related to burnout in athletic trainers. *Research Quarterly for Exercise and Sport,* 321-328.

Chapman, D.M. (1997). Burnout in emergency medicine: what are we doing to ourselves? *Academic Emergency Medicine,* 245-247.

Curtis, N., Helion, J.G., Domsohn, M. (1998). Student athletic trainer perceptions of Clinical supervisor behaviors: a critical incident study. *Journal of Athletic Training,* 249-253.

Duncan, K.M., Wright, K.E. (1992). A national survey of athletic trainer roles and responsibilities in the allied clinical setting. *Journal of Athletic Training,* 311-316.

Edwards, A.L. (1957). Techniques of attitude scale construction. *New York Crofts Inc.*

Fisher, C.A., Hoisington, L.L. (1993). Injured athletes' attitudes and judgments toward rehabilitation adherence. *Journal of Athletic Training,* 48-54.

Fisher, C.A., Mullins, S.A., Frye, P.A. (1993). Athletic trainers' attitudes and judgments of injured athletes' rehabilitation adherence. *Journal of Athletic Training,* 43-46.

Gieck, J. (1984). Stress management and the athletic trainer. *Journal of Athletic Training,* 115-119.

Gieck, J., Brown, R.S., & Shank, R.H. (1982). The burnout syndrome among athletic trainers. *Journal of Athletic Training,* 36-40.

Hedgpeth, E.G., Sowa, C.J. (1998). Incorporating stress management into athletic injury rehabilitation. *Journal of Athletic Training*, 372-374.

Kahanov, L., Fairchild, P.C. (1994). Discrepancies in perceptions held by injured athletes and athletic trainers during the initial injury evaluation. *Journal of Athletic Training,* 70-75.

Larson, G.A., Starkey, C., Zaichkowsky, L.D. (1996). Psychological aspects of athletic injuries perceived by athletic trainers. *The Sport Psychologist*, 37-47.

Likert, R.A. (1932). A technique for measurement of attitudes. *Arch Psychology,* 140.

Moulton, M.A., Molstad, S., Turner, A. (1997). The role of athletic trainers in counseling collegiate athletes. *Journal of Athletic Training*, 148-150.

National Athletic Trainer's Association. (2003). Recommendations and guidelines for appropriate medical coverage of intercollegiate athletics. National Athletic Trainers' Association, 1-18.

National Athletic Trainers' Association Board of Certification. Role delineation validation study for the entry-level athletic trainers' certification examination. Dallas, TX, National Athletic Trainers' Association, 59-67.

Nellis, S.M. (1994). Leadership and management: techniques and principles for athletic training. *Journal of Athletic Training,* 328-335.

Pitney, W.A., Ilsley, P., Rintala, J. (2002). The professional socialization of certified athletic trainers in the national collegiate athletic association division I context. *Journal of Athletic Training,* 63-70.

Steeves, C.A., Childs, S.M. (2002). Perceptions of Student Athletes Regarding Athletic Training at Humboldt State University. *A Pilot Study*, Humboldt State University.

Stilger, V.G., Etzel, E.F., Lantz, C.D. (2001). Life-Stress sources and symptoms of collegiate student athletic trainers over the course of an academic year. *Journal of Athletic Training,* 401-407.

Thomas, J.R., Nelson, J.K. (1996). Research methods in physical activity. Third edition. Human Kinetics.

Unruh, S. (1998). Perceptions of athletic training services by collegiate student-athletes: A measurement of athlete satisfaction. *Journal of Athletic Training,* 347-350.

Unruh, S. (1996). The perception student-athletes have of their athletic trainers and the medical services provided them by the athletic departments at their institution. *Dissertation*-University of Arkansas.

Weidner, T.G., Vincent, W.J. (1992). Evaluation of professional preparation in athletic training by employed, entry-level athletic trainers. *Journal of Athletic Training,* 304-310.

Wiese, M.R., & Troxel, R.K. (1986). Psychology of the injured athlete. *Athletic Training,* 104-109, 154.

Wiese, D.M., Weiss, M.R., & Yukelson, D.P. (1991). Sport psychology in the training room: A survey of athletic trainers. *The Sport Psychologist,* 25-40.

APPENDIX A

Questionnaire

Survey Introduction and Instructions

Proctor Instructions

First of all I would like to thank you for your time and effort in helping me with my thesis project. Without your help, this survey would have become next to impossible. Upon completion of this project, once all of the information has been statistically analyzed, you will receive a copy of results from this study. Please feel free to share these results with your athletic department, as they have been studied in order to help improve your athletic training program. If you have any questions or concerns, please do not hesitate to call or email me. My phone number is 650-520-1497. My email address is csteeves22@yahoo.com.

Below are the instructions to be read aloud to each group of student athletes. The survey only takes approximately 5 minutes, so hopefully you can ask each of the coaches if you can take 5 minutes out of their time before or after practice or during a meeting. I will be emailing each coach and informing them that you, as a proctor will be approaching them regarding this survey. I will explain to them what it is about and why it is important that they comply with this process.

Once again, thank you for your time and dedication to the continuing growth of the athletic training field.

YOUR INSTRUCTIONS:

After receiving blank surveys in the mail, obtain permission from each selected coach for their team to take this survey at a given time and place. It should only take 5 minutes out of their time. Once the student athletes have congregated, read the section below stated “Instructions to be read aloud to student athletes”. After the instructions

have been read, hand out the surveys to each student athlete as well as the pencils. Once all of the completed surveys have been placed into the given envelop, please seal the envelop shut. The envelop will be already preaddressed and stamped. Send out the completed surveys as soon as you can. Your promptness will be greatly appreciated.

INSTRUCTIONS TO BE READ ALOUD TO STUDENT ATHLETES:

The following questionnaire was designed to help the NAIA, (GSAC and CALPAC) Athletic Training Facilities assess its practices and procedures in dealing with athletes at each institution. This questionnaire is completely voluntary, anonymous, and confidential. DO NOT put your name on this paper to help insure your anonymity. Please take a moment to answer the following questions. We would appreciate your honesty and truthfulness in your responses. **If you are not 18 years of age, or if you answer no to question #7, please refrain from taking the survey.** The questionnaire should only take approximately 5 minutes. You will be asked 8 demographical questions in which you should circle or enter in the appropriate answer. The following 26 statements will be rated on a Likert scale ranging from 1, strongly agree to 6, not applicable. Please rate each statement to the best of your ability.

Once you have completed your survey please place it in the given envelop at the front of the room next to the proctor. Please remember to not put your name on your survey. Thank you for your time.

Student-Athlete Response Form

Instructions:

The following questionnaire was designed to help the NAIA, (GSAC and CALPAC) Athletic Training Programs assess its practices and procedures in dealing with athletes at each institution. This questionnaire is completely voluntary, anonymous, and confidential. Do not put your name on this paper to help insure your anonymity. Please take a moment to answer the following questions. We would appreciate your honesty and truthfulness in your responses. Thank you for you time. **If you are not 18 years of age, or if you answer no to question #7, please refrain from taking the survey.**

General information- Please circle your answers (write in your age and institution).

1) What is your gender? M F

2) What is your age? _____

3) What institution do you attend? _____

4) What year are you in school? Freshman Sophomore Junior Senior

5) What is your year of sport eligibility? Freshman Sophomore Junior Senior

6) What intercollegiate sport do you play?

Women's Volleyball Men's Soccer Women's Soccer Men's Basketball Women's Basketball

7) Have you ever used your institutions athletic training room or the services of an Athletic Trainer? Y N

8) Does your institution have student athletic trainers? Y N

The following statements are to be answered using a 1-5 scale. 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree. Please circle the response that best suits your satisfaction with your athletic trainer(s) and the services they provide.

	Strongly Disagree 1	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**	**Not Applicable 6**
9) The athletic training room and its staff are essential in intercollegiate athletics……	1	2	3	4	5	6

10) The athletic trainers at my institution conduct themselves in a professional manner……1	2	3	4	5	6
11) I feel the environment within my athletic training room creates a positive atmosphere……1	2	3	4	5	6
12) I feel more comfortable as an athlete when an athletic trainer travels to away games with the team……1	2	3	4	5	6
13) My institutions training room has adequate resources for treatments and rehabilitation (ultrasound, muscle stim, ice, balls, open space)……..1	2	3	4	5	6
14) The number of athletic trainers provided by my institution is effective for the school/ athlete population size……1	2	3	4	5	6
15) There is always a certified athletic trainer at all of my practices, games, and events……1	2	3	4	5	6
16) I am satisfied with the quality of care provided by my athletic trainer…….1	2	3	4	5	6
17) I feel confident with the knowledge demonstrated by my athletic trainer regarding my injuries……1	2	3	4	5	6
18) My athletic trainers' method for proper rehabilitation of athletic injuries is ideal.....1	2	3	4	5	6
19) The amount of time it takes for an athletic trainer to approach me for consultation once I enter the athletic training room is suitable……1	2	3	4	5	6
20) The location of my athletic trainer during practice is such that he/she is capable of responding quickly and properly to an injury……1	2	3	4	5	6

21) I am satisfied with the time lapsed from when the trainer knows I have a serious injury until I see a physician……1	2	3	4	5	6
22) The level of concern my athletic trainer portrays toward each athlete is appropriate no matter what sport they are in……..…1	2	3	4	5	6
23) The quality of care provided to each athlete is consistent for both males and females…….…1	2	3	4	5	6
24) The amount of medical supplies provided for use by my athletic trainer is sufficient……...1	2	3	4	5	6
25) My athletic trainer provides me with the information I need to prevent re-injury after sustaining an initial injury……....1	2	3	4	5	6
26) I am satisfied with the availability of my team physician……....1	2	3	4	5	6
27) The time it takes from when I get injured until the time the coaching staff is made aware of my injury is appropriate……..1	2	3	4	5	6
28) The level of respect my athletic trainer gives me is suitable…….…..1	2	3	4	5	6
29) I am satisfied with the assessment process my athletic trainer uses to evaluate my injury……....1	2	3	4	5	6
30) 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……1	2	3	4	5	6
31) All of the athletic trainers trust one another to properly assist me as an athlete…….…...1	2	3	4	5	6
32) I am confident in the athletic trainers'					

decision to remove me from a game or practice due to my injury or illness……...1	2	3	4	5	6
33) I am satisfied with the training room hours of availability to athletes prior to practice or competition……1	2	3	4	5	6
34) Overall, I am satisfied with the athletic training services……....1	2	3	4	5	6