This is to certify that the
thesis entitled

EXPLORING COLLEGIATE STUDENT-ATHLETES' SATISFACTION WITH ATHLETIC TRAINERS

presented by

Jason Joseph Pilgrim

has been accepted towards fulfillment
of the requirements for the

M.S. degree in Kinesiology

Major Professor's Signature

JULY 13, 2010

Date

EXPLORING COLLEGIATE STUDENT-ATHLETES' SATISFACTION WITH ATHLETIC TRAINERS

By

Jason Joseph Pilgrim

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

Kinesiology

2010

ABSTRACT

EXPLORING COLLEGIATE STUDENT-ATHLETES' SATISFACTION WITH ATHLETIC TRAINERS

By

Jason Joseph Pilgrim

In recent times, feedback on the quality of patient care and patient satisfaction has become very important in efforts to measure and improve the quality of healthcare. This finding may also allow us to achieve the purpose of this study of investigating the differences in level of satisfaction with athletic training services by student athletes according to their nationality, sex and athletic division. Student- athletes from Trinidad & Tobago attending college in the United States of America and their teammates were invited to participate in the study. A second study was conducted to determine the effect of sex or experience of the athletic trainer on the student-athletes' satisfaction with the athletic training services. Field hockey players competing in the United States of America NCAAI division were invited to participate in the study. The instrument used in both studies was a questionnaire consisting of 50 questions developed by Scott Unruh. Overall, the student-athletes were satisfied with the quality of the athletic training services received from their athletic trainers. However, no significant differences were observed in the level of satisfaction perceived by the student-athletes for any of the independent variables of both Study 1 (nationality, sex and athletic division) and Study 2 (athletic trainer's sex and athletic trainer's title).

Key Words: Athletic Training, satisfaction, student-athlete

DEDICATION

This work serves as a culmination of a mothers dream for her son to be all he can be. My mother's faith in my potential has never wavered even for one second. She has always seen greatness in me even when I did not see it in myself. I am truly blessed to know a mother's love.

I would like to dedicate this thesis to my mother, Joan Pilgrim.

Also, glory to God, for without him, this will not be possible.

ACKNOWLEDGEMENTS

Many persons contributed to the completion of my thesis. First and foremost I offer my sincerest gratitude to my thesis supervisor, Dr. Tracey Covassin. Dr. Covassin spent countless hours reviewing my work, providing guidance and support throughout this entire process. I would also like to thank the other members of my thesis committee, Dr. Sally Nogle and Dr. Joey Eisenmann whose time, knowledge and insightful criticisms aided in the completion of this project in an innumerable amount of ways.

This study also richly benefited from the previous work of Dr. Scott Unruh. I would like to thank Dr. Unruh for providing me with the instrument of his study and granting me permission to use it. To the athletes and coaches of Michigan State University Field Hockey and Track & Field/ Cross Country teams, I wish to express my sincere appreciation for allowing me to "pick your brains" on your experiences with athletic trainers. To all of the subjects of this study, I thank you. I would also like to thank Dr. Oba Gulston and Mrs. Helen Knull for their assistance in the location of subjects and the distribution of questionnaires. My appreciation also goes to Ms. Naghme Naseri for proof reading this document.

In closing, I will like to thank the Government of Trinidad & Tobago for giving me the opportunity to pursue undergraduate education, and Michigan State University for funding my graduate studies. Finally, I thank my family, friends and the "Suga" crew for supporting and keeping me grounded and sane throughout my college career. I would also like to issue a special thank you to, Ruby, Esther, Kathleen, Markus, Nathaniel, the Pontiflets and Mr. Mark Gibson.

Table of Contents

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Overview of the Problem

In recent times, the quality of patient care and patient satisfaction has become very important in efforts to measure and improve the quality of health care (Haskell & Brown, 1998; Cleary, 1999). One example of institutions measuring the quality of health care is the U.S. Agency for Healthcare Research and Quality (AHRQ). The AHRQ funds and administers the Consumer Assessment of Healthcare Providers and Systems (CAHPS) program. The CAHPS program uses surveys to conduct assessments of patients' experiences with healthcare in the United States. CAHPS survey data is accessed by "*patients and consumers, quality monitors and regulators, purchasers, provider organizations, and health plans either seeking to contract quality healthcare services or improve their quality of care"* (CAHPS, 2008).

The quality of patient care has been broken into two parts: technical care and interpersonal relationships (Donabedian, 1988). Technical care depends on the knowledge base and skill set of the practitioner. A practitioner with a great knowledge base may be better prepared to develop and implement strategies as needed (Donabedian, 1988). However, Donabedian (1988) also recognizes the importance of the interpersonal relationship between the practitioner and the patient. The author states, "the interpersonal process is the vehicle by which technical care is implemented and on which its success depends" (Donabedian, 1988). While patients lack the knowledge and experience to accurately judge the

technical care of a practitioner, they can judge and offer feedback on the delivery, success, and satisfaction with the technical care.

Recently, there has been an increased interest in patient satisfaction with healthcare services (Aharony & Strasser, 1988). Several studies have documented the benefits that patient satisfaction studies can have on the service provided by medical professionals (Aharony & Strasser, 1988). These benefits include but are not limited to recognitions of concerns, limitations, and needs for improvements in the provision of the service (Aharony & Strasser, 1988). In contrast, there have been no such increases in the research of patient satisfaction in the allied healthcare field of athletic training. Given healthcare's new appreciation of patients' preception of care, there is a need for the field of athletic training to pursue more research in this area.

In 1998, the National Athletic Trainers' Association (NATA) mandated research into a possible role for athletic training on the world stage (Ferrara, 2006). As NATA seeks to globalize the profession of athletic training, it would be beneficial to establish the level of satisfaction with athletic training experience by patients/athletes of different nationalities. Research on the perception of athletic training services by different cultures may also help the NATA tailor athletic training services to be more appealing to countries other than the United States of America. One such country is Trinidad and Tobago. Moreover, research should be completed to investigate if United States athletes differ on their level of satisfaction with athletic training services compared to Trinidad and Tobago athletes competing on the United States of America collegiate circuit.

After survey administration of the first study, it was determined that there were several other factors that could affect the outcome of the study: sex and experience of athletic trainer. A second study was conducted using NCAA Division I Field Hockey athletes. This study allowed us to focus on athletes of the same sex, athletic division and sport, allowing us to examine whether the sex or the rank/ title of the athletic trainer influenced the athlete's perception of satisfaction with the athletic training service.

Significance of Problem

Ato Boldon was a winner of four Olympic medals (1 silver, 3 bronze) and is considered one of the most successful track and field athletes in Trinidad and Tobago (IAAF, 2009). In the mid 1990's, he attended the University of California, Los Angeles and was a member of its track and field team (Boldon, Ato). In 2005, Ato Boldon ranked his athletic trainer as the third, or, potentially even the second most important person in his collegiate career (Boldon, 2005). However, is Boldon's perception of satisfaction with his collegiate athletic training experience shared by other Trinidad and Tobago athletes competing at universities/colleges in the United States of America? How does the student-athlete's satisfaction with the athletic training services vary according to nationality, for example, Trinidad & Tobago versus the USA?

In the intercollegiate setting of the United States of America, athletic trainers serve as the central figure in the delivery of healthcare services to the student-athletes. Because of the convenience of this healthcare delivery system, athletic trainers are often the first person who interacts with the injured athlete.

The athletic trainer works under the guidance of a physician and is responsible for the prevention, evaluation, immediate care, rehabilitation and management of injuries. In order for anyone to achieve certification as an athletic trainer, they must complete a standardized educational process from an accredited program and pass a board certification exam. The profession of athletic training has grown from a few individuals traveling with the Olympic teams of the United States in the 1930s (Ebel, 1999) to over 30,000 certified athletic trainers (ATC) nationwide (NATA, 2010). Athletic trainers are represented by the professional organization, National Athletic Training Association (NATA) which was founded in 1950 and continues to manage the growth of the profession (Ebel, 1999).

It is expected that all athletic training programs should produce skilled athletic trainers with a great knowledge base as the programs all complete a standardized course of study. This knowledge base helps the athletic training student to pass the certification exam. Certified athletic trainers are employed by many different institutions to provide care to individuals. Therefore, to effectively quantify the quality of health care provided by an athletic trainer, we must gain feedback from the individuals served by athletic trainers. Previous research found that student-athletes expressed satisfaction with athletic training services. However, the level of satisfaction differed across the board according to sex, sports profile and level of competition (Unruh,1998; Unruh, Marta, & Seshadri 2005) . In, an undergraduate research study at the University of Wisconsin – Eau Claire, Maresh & Peterson (2007) found that the university's student-athletes expressed a pattern of satisfaction with their athletic training services. However,

to-date, no research has investigated the relationship between the levels of satisfaction with athletic training services of the student-athletes born in United States versus the Trinidad and Tobago student-athletes competing at American Universities.

There are several other factors which may affect the student-athlete's level of satisfaction with his/ her athletics trainer. Drummond et al (2007) showed that some athletes may display discomfort with the care given by their athletic trainer because of the sex of the athletic trainer. According to the self-reported comfort of collegiate athletes with injury and condition can be same-sex and opposite –sex athletic trainers, the authors found significant differences in comfort levels between the sexes of athletic trainers for gender specific injuries and conditions (Drummond, Hostetter, & Laguna, 2007). It is assumed that if an athlete experiences discomfort with a gender specific issue while interacting with an athletic trainer, then their perception of the care received would diminish. It was also assumed that athletes would have a greater perception of care if the care was received from an experienced athletic trainer. In most cases, the title of undergraduate athletic training student, graduate assistant athletic trainer, intern and staff athletic trainer, usually correlates with the experience of the athletic trainer in ascending order. Maresh and Peterson (2007) found that certified athletic trainers received a rating of slightly higher satisfaction scores on athletic training services compared to athletic training students.

Purpose Statement

The purpose of this study is to explore factors which may affect the student-athlete's satisfaction with the athletic training service provided by the athletic trainer.

Hypotheses

This study examined the following hypothesis:

1. There will be no difference in level of satisfaction in athletic training services between US based student-athletes originating from Trinidad and Tobago and US student-athletes.

Exploratory Questions for study 1

2. Are there differences in the level of satisfaction in athletic training services between NCAA divisions?
3. Are there differences in the level of satisfaction in athletic training services between sexes (student-athletes)?

Exploratory Questions for Study 2

4. Are there significant differences in the level of satisfaction of the field hockey athletes with the athletic training services provided according to the sex of the athletic trainer?
5. Are there differences in the level of satisfaction of the field hockey athletes with the athletic training services provided according to the rank/title of athletic trainer?

Definition of Terms

Agency for Healthcare Research and Quality (AHRQ): Federal agency with the responsibility of improving the quality, safety, efficiency, and effectiveness of health care for all Americans.

Board of Certification (BOC): national certifying body for athletic trainers in the United States; administers ATC® credential to those meeting qualifications to become a certified athletic trainer.

Certified Athletic Trainer (ATC): a unique health care provider who specializes in the prevention, assessment, treatment, and rehabilitation of injuries and illnesses.

Canadian Athletic Therapists' Association (CATA): the professional membership association for certified athletic therapist in Canada.

Commission on Accreditation of Athletic Training (CAATE): the accreditation body for entry level athletic training programs.

Consumer Assessment of Healthcare Providers and Systems (CAHPS): a public/ private program to develop standardized surveys of patients experiences with healthcare providers and facilities.

Facebook: a popular online social network..

Federation Internationale de Football Association (FIFA): the international governing body for football (soccer).

International Association of Athletics Federation (IAAF): the international governing body for athletics.

Institutional (Internal) Review Board (IRB): the committee responsible for protecting the rights and welfare of research subjects through the processing of monitoring, reviewing and approving research projects.

National Association of Intercollegiate Athletics (NAIA): an athletic association for smaller colleges and universities in the United States

National Collegiate Athletic Association (NCAA): the major athletic association for colleges and universities in the United States. This association is divided into three divisions: Division I, Division II and Division III. Divisions I & II are the only divisions allowed the offering of scholarships to their athletes.

National Athletic Trainers' Association (NATA): the professional membership association for certified athletic trainers and others who support the athletic training profession.

National Research Corporation (NRC): a company dedicated to the measurement of patients' experience with healthcare services and performance.

Olympic (summer) Games: a major international multi-sport games involving thousands of elite athletes representing their countries. This competition is held every four years.

Pan American Games: a multisport games held every four years for athletes from the Americas.

The Picker Institute: a company dedicated to the measurement of patients' experience with healthcare services and performance.

Trinidad and Tobago Olympic Company (TTOC): the umbrella organization that represents the sporting bodies of each Olympic sport in Trinidad & Tobago.

Trinidad and Tobago Intercollegiate Athlete: any athlete born and completed high school in Trinidad & Tobago.

United States Intercollegiate Athlete: any athlete born and completed high school in the United States of America.

(FIFA) World Cup Championship: a major international football (soccer) tournament among 32 teams of countries around the world. This tournament is held every four years.

(IAAF) World Track and Field Championships: A major international track and field competition.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Athletic trainers find employment in many different places including schools, clinics, professional and industrial settings (NATA, 2010a). In clinics, schools and professional teams, athletic trainers provide care for clinical patients, student- athletes and professional athletes respectively (NATA, 2010a). The NATA considers athletic trainers to be a valuable allied healthcare provider. However, how does the athletic training customer perceive the services of the athletic trainer? What is the perception of the patient/athlete towards the athletic training services rendered? Do all patients/ athletes have the same or similar perceptions of athletic trainers and the services provided by athletic trainers? Does cultural origin affect the perception of athletic training services? In an attempt to answer these questions, the review of literature will explore the history of athletic training, athletic training profession, satisfaction with athletic training services, globalization of athletic training and the relationship between the Trinidad and Tobago athlete and the athletic trainer.

History of Athletic Training

Athletics can be dated back to ancient Grecian times. We can assume that where there are athletics, there are also athletic trainers or *paidotribes* as they were referred to then. After the fall of Rome, athletic competition vanished. It was not until the 19th Century that interest in athletics began to rise once again. During this time, gymnastics and a recreational form of football (soccer)

developed in Europe and the United States. Back then, coaches and physicians managed athletic injuries. Very few schools actually employed a "trainer" until the 1920's. In this era, the profession saw opportunities arise at major universities for medical personnel to work with active populations. Through the 1930's, athletic trainers began traveling with the United States Olympic teams and shared ideas and techniques they learned via workshops and publications (Ebel, 1999). As people began to hear about the birth of this new profession, many men were drawn to institutions where athletic training was practiced (Ebel, 1999).

In 1938, the first National Athletic Trainers' Association (NATA) was born during the Drake Relays at the University of Iowa (Prentice, 2010).The association had two annual meetings, one at the Drake Relays (Western Division), and the other at the Penn Relays (Eastern Division). Despite the hope of organization of the profession of athletic training, the United States became involved in World War II soon after the birth of the first NATA. During this time, athletic trainers were drafted and deployed as soldiers (Prentice, 2010). Some athletic trainers utilized their skills by preparing men physically for battle and assisting with the rehabilitation of injured soldiers (Prentice, 2010).Even though some athletic trainers remained active during the war, the NATA went bankrupt and in 1944, the first NATA no longer existed (Ebel, 1999).

Although the first NATA disbanded during World War II, after the war, groups of athletic trainers began to form regional associations around the nation. However, these organizations needed a unifying unit, which lead to the birth of

the new NATA in 1950 (Prentice, 2010).The organization slowly grew, hosting annual meetings, collecting dues, establishing district and executive representatives, and recruiting membership. In 1956, the first athletic training scholarly journal was established and a Code of Ethics was adopted in 1957 in accordance with the NCAA (Delforge & Behnke, 1999).

After 20 years of growth, the NATA decided it was time for change and restructuring. An organizational chart was developed, and the executive council was restructured and the position of NATA president was established (Kutz, 2010). Also during this decade, the Board of Certification (BOC) Examination was implemented, the inclusion of women in the profession began, and state licensure was emerging. During the 1980's, the NATA gained corporate sponsorship in Quaker Oats/Gatorade and became incorporated as the NATA Inc (Kutz, 2010). The membership totaled over 10,000 and the budget of the corporation was rapidly growing (Kutz, 2010). A headquarters was established in Dallas, Texas and a full-time professional staff was hired to run the operations of the NATA.

Throughout the 1990's, the NATA underwent major changes to operational procedures, rules, and bylaws. A new Policies and Procedures Manual was developed. The NATA also hired a company to assist in the assimilation of a strategic plan for the organization and profession. By 1999, the NATA enlisted over 25,000 members in good standing; a drastic change from 101 members 50 years prior (Ebel, 1999).

As of December 2009, the NATA membership totals 36,387 (NATA, 2010b). Of these members, 26,419 are certified athletic trainers (ATCs), which accounts for 72.6% of the certified population (NATA, 2010b). These unique health care professionals now work in diverse settings, ranging from the traditional intercollegiate setting to emerging settings, such as performing arts or rodeo, specializing in the prevention, assessment, treatment and rehabilitation of injuries and illnesses.

Athletic Training Profession

Athletic trainers are the coordinators of the healthcare system in Intercollegiate Athletics in the United States of America. In this setting, the athletic trainer provides on-site supervision of intercollegiate athletes' sport-related activities and is responsible for the prevention, recognition, initial evaluation, treatment, referral and rehabilitation of the injuries of college athletes (Starkey & Ryan, 2002; Andersen, Hall, & Martin, 2004; Prentice, 2010). The definition of athletic training that was approved by NATA Board of Directors in October, 2007 defines athletic training as "*...practiced by athletic trainers, health care professionals who collaborate with physicians to optimize activity and participation of patients and clients. Athletic training encompasses the prevention, diagnosis, and intervention of emergency, acute, and chronic medical conditions involving impairment, functional limitations, and disabilities" (*NATA 2008).

The educational content for all entry-level athletic training programs are standardized across the board. Athletic training students complete the same

NATA competencies and clinical proficiencies as mandated by The Commission on Accreditation of Athletic Training Education (CAATE). CAATE maintains the required standard of athletic training education programs through its comprehensive accreditation review processes. Each program must adhere to the standard for athletic training education programs as mandated by CAATE in order to remain a CAATE accredited athletic training education program. In September 2009 there were 346 CAATE accredited undergraduate athletic training education programs and 20 entry-level graduate programs (CAATE, 2009).

The CAATE standards are inclusive of the National Athletic Trainers' Association's Education Council's Educational Competencies and Clinical Proficiencies. Currently in its fourth edition, the NATA competencies are designed to define the skills required of an entry-level ATC to provide athletic training services to patients/athletes of differing age, sex, work, lifestyle and need.

The competencies are divided into Foundational Behaviors of Professional Practice, and 12 content areas comprising the knowledge and skill set of the entry-level ATC. The 12 areas are Risk Management and Injury Prevention, Pathology of Injuries and Illnesses, Orthopedic Clinical Exam and Diagnosis, Medical Conditions and Disabilities, Acute Care of Injuries and Illnesses, Therapeutic Modalities, Conditioning and Rehabilitative Exercise, Pharmacology, Psychosocial Intervention and Referral, Nutritional Aspects of Injuries and Illnesses, Health Care Administration, and Professional Development and

Responsibility (Prentice, 2010). Each content area is subdivided into behavioral classifications of cognitive domain (i.e., knowledge and intellectual skills), psychomotor domain (i.e., manipulative and motor skills), and clinical proficiencies (i.e. decision-making and skill application). The "Foundational Behaviors" are basic behaviors that should permeate every aspect of professional practice and should be incorporated into every educational aspect of athletic training education. Cultural competence is included in the behaviors, stating the "ATC should understand the cultural differences of patients' attitudes and behaviors toward health care, demonstrate knowledge, attitudes, behaviors, and skills necessary to achieve optimal health outcomes for diverse patient populations, and demonstrate knowledge, attitudes, behaviors, and skills necessary to work respectfully and effectively with diverse populations and in a diverse work environment" (NATA, 2009b).

In order to become a certified athletic trainer, an individual must obtain a degree from an athletic training education program accredited by CAATE and pass the BOC examination (NATA, 2009b). The BOC certification exam tests the knowledge of the athletic training student in the following six domains: 1) injury/illness prevention, 2) clinical evaluation and diagnosis of injuries/illness, 3) immediate care of injuries/illnesses, 4) treatment, rehabilitation, and reconditioning of injuries/illnesses, 5) organization and administration, and 6) professional responsibility (BOC, 2006). These six domains were identified by a Role Delineation study conducted by the NATA as the essential knowledge base and skills set of a certified athletic trainer (BOC, 2006).

The practice of athletic training is also standardized as all certified athletic trainers are required to comply with the BOC Standards of Professional Practice. The BOC Standards of Professional Practice are made up of two sections: Practice Standards and Code of Professional Responsibility. The Practice Standards describe what services one can expect from a certified athletic trainer, and allows the certified athletic trainer to understand his or her duty and obligation as a holder of the ATC® credential. The Practice Standards can also be used to evaluate the services rendered by a certified athletic trainer (BOC, 2006). The Practice Standards are broken down into seven sections and are listed below as found on the BOC website.

Standard 1: Direction: The athletic trainer renders service or treatment under the direction of a physician.

Standard 2: Prevention: The athletic trainer understands and uses preventive measures to ensure the highest quality of care for every patient.

Standard 3: Immediate Care: The athletic trainer provides standard immediate care procedures used in emergency situations, independent of setting.

Standard 4: Clinical Evaluation and Diagnosis: Prior to treatment, the athletic trainer assesses the patient's level of function. The patient's input is considered an integral part of the initial assessment. The athletic trainer follows standardized clinical practice in the area of diagnostic reasoning and medical decision-making.

Standard 5: Treatment, Rehabilitation and Reconditioning: In development of a treatment program, the athletic trainer determines appropriate treatment, rehabilitation and/or reconditioning strategies. Treatment program objectives

include long and short term goals and an appraisal of those which the patient can realistically be expected to achieve from the program. Assessment measures to determine effectiveness of the program are incorporated into the program.

Standard 6: Program Discontinuation: The athletic trainer, with collaboration of the physician, recommends discontinuation of the athletic training service when the patient has received optimal benefit of the program. The athletic trainer, at the time of discontinuation, notes the final assessment of the patient's status.

Standard 7: Organization and Administration: All services are documented in writing by the athletic trainer and are part of the patient's permanent records. The athletic trainer accepts responsibility for recording details of the patient's health status.

These above mentioned standards provide the practice expectations for all athletic trainers. Athletic trainers are also required to follow a Code of Professional Responsibility. This Code of Professional Responsibility asks that all certified athletic trainers and applicants conduct themselves in a "professionally responsible manner in all athletic training services and activities" (BOC, 2006). The Code of Professional Responsibility consists of six parts and is listed below according to the BOC.

Code 1: Patient Responsibility

The athletic trainer or applicant:

1.1 Renders quality patient care regardless of the patient's race, religion, age, sex, nationality, disability, social/economic status or any other characteristic protected by law.

1.2 Protects the patient from harm, acts always in the patient's best interests and is an advocate for the patient's welfare.

1.3 Takes appropriate action to protect patients from athletic trainers, other healthcare providers or athletic training students who are incompetent, impaired or engaged in illegal or unethical practice.

1.4 Maintains the confidentiality of patient information in accordance with applicable law.

1.5 Communicates clearly and truthfully with patients and other persons involved in the patient's program, including, but not limited to, appropriate discussion of assessment results, program plans and progress.

1.6 Respects and safeguards his or her relationship of trust and confidence with the patient and does not exploit his or her relationship with the patient for personal or financial gain.

1.7 Exercises reasonable care, skill and judgment in all professional work.

Code 2: Competency

The athletic trainer or applicant:

2.1 Engages in lifelong, professional and continuing educational activities.

2.2 Participates in continuous quality improvement activities.

2.3 Complies with the most current BOC recertification policies and requirements.

Code 3: Professional Responsibility

The athletic trainer or applicant:

3.1 Practices in accordance with the most current BOC Practice Standards.

3.2 Knows and complies with applicable local, state and/or federal rules, requirements, regulations and/or laws related to the practice of athletic training.

3.3 Collaborates and cooperates with other healthcare providers involved in a patient's care.

3.4 Respects the expertise and responsibility of all healthcare providers involved in a patient's care.

3.5 Reports any suspected or known violation of a rule, requirement, regulation or law by him/herself and/or by another athletic trainer that is related to the practice of athletic training, public health, patient care or education.

3.6 Reports any criminal convictions (with the exception of misdemeanor traffic offenses or traffic ordinance violations that do not involve the use of alcohol or drugs) and/or professional suspension, discipline or sanction received by him/herself or by another athletic trainer that is related to athletic training, public health, patient care or education.

3.7 Complies with all BOC exam eligibility requirements and ensures that any information provided to the BOC in connection with any certification application is accurate and truthful.

3.8 Does not, without proper authority, possess, use, copy, access, distribute or discuss certification exams, score reports, answer sheets, certificates, applicant files, documents or other materials.

3.9 Is candid, responsible and truthful in making any statement to the BOC, and in making any statement in connection with athletic training to the public.

3.10 Complies with all confidentiality and disclosure requirements of the BOC.

3.11 Does not take any action that leads, or may lead, to the conviction, plea of guilty or plea of nolo contendere (no contest) to any felony or to a misdemeanor related to public health, patient care, athletics or education; this includes, but is not limited to: rape; sexual abuse of a child or patient; actual or threatened use of a weapon of violence; the prohibited sale or distribution of controlled substance, or its possession with the intent to distribute; or the use of the position of an athletic trainer to improperly influence the outcome or score of an athletic contest or event or in connection with any gambling activity.

3.12 Cooperates with BOC investigations into alleged illegal or unethical activities; this includes but is not limited to, providing factual and non-misleading information and responding to requests for information in a timely fashion.

3.13 Does not endorse or advertise products or services with the use of, or by reference to, the BOC name without proper authorization.

Code 4: Research

The athletic trainer or applicant who engages in research:

4.1 Conducts research according to accepted ethical research and reporting standards established by public law, institutional procedures and/or the health professions.

4.2 Protects the rights and well being of research subjects.

4.3 Conducts research activities with the goal of improving practice, education and public policy relative to the health needs of diverse populations, the health workforce, the organization and administration of health systems and healthcare delivery.

Code 5: Social Responsibility

The athletic trainer or applicant:

5.1 Uses professional skills and knowledge to positively impact the community.

Code 6: Business Practices

The athletic trainer or applicant:

6.1 Refrains from deceptive or fraudulent business practices.

6.2 Maintains adequate and customary professional liability insurance.

Any proven failure of a certified athletic trainer to comply with the Code can result in disciplinary action by the BOC including suspensions or revocation of the ATC® credential (BOC, 2006). Given the strict standards of athletic training as stated above, it can be assumed that the services provided by certified athletic trainers are very similar in nature.

Satisfaction of Athletic Training Services

Studies on the perception and/ or satisfaction with the services of athletic trainers by their patients are very limited. In fact, I have only located two published studies and one undergraduate research study which are directly related to satisfaction with the services of athletic trainers. Unruh (1998) published a study in the *Journal of Athletic Training* titled "Perception of Athletic Services by Collegiate Student-Athletes: A Measurement of Athlete Satisfaction." Unruh sought to establish whether the perception of the athletic trainer and the athletic training services differed according to athletes of different sex, sport profiles and/ or levels of competition. Athletes participating in 14 schools in the Southeast Conference and 17 schools in the Gulf South Conference volunteered

for this study. The Southeast Conference consists of National Collegiate Athletic Association (NCAA) Division I schools while schools in the Gulf South Conference compete at the NCAA Division II level. All schools employed athletic training services. Unruh (1998) identified sports as "High or Low Profile Sports" using information gathered from sport information directors. The sports that received the greatest number of requests for information were determined to be the "High Profile Sports", while all others were considered as "Low Profile Sports". Therefore, football, basketball and baseball were classified as "High Profile Sports." The authors developed a questionnaire using the duties as described in the BOC Role Delineation Study. Unruh (1998) determined face and content validity for the questionnaire. Face validity means that the instrument in question looks like it will measure what it was created to measure. Unruh obtained face validity for his instrument from professionals within the athletic training profession (Unruh 1998). Reliability of the questionnaire was proven using a split test for internal consistency (0.8211) and a Cronbach coefficient alpha test (0.9017). This questionnaire was comprised of 50 questions. Thirty-six questions were designed to collect responses on a five-point Likert Scale: strongly agree, moderately agree, neutral, moderately disagree and strongly. The other 14 questions were designed to collect "Yes" or "No" responses.

In order to complete a quantitative analysis of the data collected by the questionnaire, point values were attached to each response: strongly agree (4),moderately agree (3), neutral (2), strongly disagree (1), moderately disagree(0), yes (1), no (0).

Questions left unanswered were scored as a neutral response. In examining differences between sexes, sports profile and athletic division, Unruh (1998) used a t-test to compare the cumulative mean scores of each group. The study found that all athletes had a positive view of their athletic trainer. However, male athletes and high profile sports athletes had a higher perception score of the services offered by their athletic trainers compared to female athletes and athletes in low profile sports. No significant differences were observed between athletes competing at NCAA I and NCAA II athletic divisions (Unruh, 1998).

In 2005, Unruh et al. conducted a follow-up study titled "Collegiate Student-athlete's Satisfaction with Athletic Trainers." This study was similar to the one described above. The authors investigated whether satisfaction would differ according to sex of the athlete, different sport profiles and/or levels of competitions. The sport profiles were divided into "High and Low Profile Sports using the same criteria as recorded by Unruh (1998). The study used NCAA division I or II athletes from randomly selected programs across the United States. Subjects were selected from schools in the four US Time Zones: East, Central, Mountain and Pacific. Site administrators were paid at each site to distribute and collect questionnaires. The questionnaire designed to obtain responses that would rate the student-athletes' satisfaction with the services provided by their athletic trainer was a modification of the questionnaire used from the Unruh (1998) study. The BOC Role Delineation was also used to develop this questionnaire (Unruh et al 2005). The questionnaire was comprised of 50 questions. Thirty-five questions were designed to collect

responses on a five-point Likert Scale: strongly agree, moderately agree, neutral, moderately disagree and strongly. The other 15 questions were designed to collect "Yes" or "No" responses.

The data collected by the questionnaire were scored similarly to the Unruh(1998) study: very satisfied (5), moderately satisfied (4), undecided (3), not satisfied (2), very dissatisfied (1), yes (2), No (1). Cumulative scores of the responses of completed questionnaires were calculated and used in the data analysis for this study. Unruh et al (2005) used a linear regression model to identify whether any of the independent variables were predictors of the cumulative score. The results of Unruh et al.'s (2005) study supported most of the findings in the first study (Unruh 1998). Student-athletes competing in high profile sports and male athletes were more satisfied with services provided by their athletic trainer than student-athletes who belonged to low profile sports and or female student athletes respectively (Unruh, Marta, & Seshadri 2005). Athletic division was not a significant predictor of student athlete's satisfaction with athletic training services. In conclusion the authors noted that the participants in the study demonstrated a high level of satisfaction with the quality of the services provided by their athletic trainers. However, the results also show significant differences exist in satisfaction with athletic training services across some sports.

In 2007, Maresh and Peterson investigated the satisfaction of student-athletes with the services provided by the athletic training staff at the University of Wisconsin at Eau Claire. The university is a member of the Wisconsin Intercollegiate Athletic Conference, a NCAA division III conference.

Questionnaires were sent to a random sampling of athletes at the University via email. The questionnaire consisted of 25 questions created under the guidance of the certified athletic trainers at The University of Wisconsin at Eau Claire to address the six domains of athletic training, determined by the BOC Role Delineation Study. Responses to the questionnaire were collected on a 5 point Likert scale. Each question on the Maresh & Peterson(2007) questionnaire required two sets of reponses, for two service providers: certified athletic trainers and athletic training students. In order, to quantify the data in this study numerical values were attached to each response as done in the previously discussed studies: strongly agree (5), agree (4), indifferent/ NA (3), strongly disagree (2), disagree (1). Data analysis was conducted by combining "the results of each question to create cumulative scores and averages for each of the domains" (Maresh & Peterson, 2007). The results of this study also supported the previous two studies. Student-athletes in the high profile sports indicated a higher satisfaction for the services provided by their athletic trainers than the student-athletes who belonged to lower profile sports. The results also indicated that satisfaction with the services provided by the athletic training program at the University of Wisconsin at Eau Claire was "generally good" (Maresh & Peterson, 2007). It must be noted the Maresh and Peterson (2007) study was an undergraduate research study which was not published in a peer reviewed scientific journal. Therefore the results of this study may not be valid. However, Maresh & Peterson(2007) presents another way of analyzing qualitative data and displaying the results. The authors calculated the response total, the response

average and the average frequency of reponses for each question . Tables and graphs were used to displayed these results.

The results of the above studies all support the statement that collegiate student-athletes exhibit satisfaction with athletic training services. However, the same results also suggest that the level of satisfaction varies across different collegiate student-athletes populations. The studies above have investigated the effect of sex, athletic division, sport profile and time zone on collegiate student-athletes' satisfaction with the services provided by their athletic trainer. To date, no research has investigated if United States athletes differ on their level of satisfaction compared to Trinidad and Tobago athletes competing at American Universities. As the NATA seeks to globalize the profession of athletic training, it would be beneficial to establish the level of satisfaction with athletic training experience by patients/athletes of different nationalities. The data gathered on a study of the perception of athletic training services by people of different cultures may help the NATA tailor athletic training services to be more appealing to the global public.

Globalization and Athletic Training Services

Currently, there are several international athletic training organizations that exist, specifically, the Japanese Athletic Training Association, Taiwan Athletic Trainers Society, and the Korean Athletic trainers' Association. There are also several study abroad opportunities available to athletic training students. The University of Georgia Athletic Training Education Program in association with the National Taiwan Sport University (NTSU) provides an athletic training

student summer experience in Taiwan (http://www.coe.uga.edu/atsat/). Ball State University athletic training program coordinates a summer study abroad program to Australia (http://www.bsu.edu/web/at/smfs/). The College of Educational Studies' Athletic Training Education Program at Chapman University (http://www.chapman.edu/ces/atep/) also coordinates a clinical education experiences for athletic training students in Australia. These study abroad opportunities allow athletic training students to interact with a different culture while working with sports teams and medical professionals in different countries.

In 1998, the NATA Board of Directors under then president Kent Falb determined that globalization was important for the development of the profession of athletic training (Ferrara, 2006). The World Federation of Athletic Training and Therapy (WFATT) was formed in 2000, to provide a forum for the exchange of ideas and knowledge between healthcare professionals around the world (Ferrara, 2006)The WFATT has 21 member organizations (See Appendix A – Table 17). The WFATT has embarked on two projects that will enhance the "knowledge and understanding of the athletic trainer" (Ferrara, 2006). The first project involved a self-study and the development of a Mutual Recognition Arrangement (MRA). In July 2005, the NATA and the Canadian Athletic Therapist Association (CATA) signed an MRA that allows NATA and CATA candidates to also become certified by the CATA and NATA respectively. This MRA also allows professional organizations from different countries with similar educational and credentialing systems to initiate the process to join the current MRA. The second

project the WFATT conducted was a *Global Analysis Study*. *The Global Analysis Study* is very similar to the *BOC Role Delineation Study*. However, the WFATT has developed and defined four domains (assessment, intervention, administration and education) compared to the BOC's six domains. The WFATT hopes to use this study to validate the practice domains of the global athletic trainer with additional information which would allow the athletic trainer to function in different countries.

Trinidad and Tobago Athletes and Athletic Training Services

Trinidad and Tobago are the most southern islands of the Caribbean. The twin island state, approximately 5,128 sq km in total area, is located seven miles off the northeast coast of Venezuela. The World Factbook estimates the population of Trinidad and Tobago to be approximately 1.2 million people as of July, 2009 (Central Intelligence Agency, 2009). Although a small country, Trinidad and Tobago is well represented in the world of international sports. The Trinidad and Tobago Olympic Committee is affiliated with 37 organizations. Each organization represents a different sport (see Appendix B – Table 18; Trinidad and Tobago Olympic Committee, 2008).

Football (soccer) is the most popular sport in Trinidad and Tobago. The country dominates the sport in the Caribbean region having won the (Caribbean Football (Soccer) Championships eight times, the most by any Caribbean Nation (McKain, 2008). In 2006, Trinidad and Tobago became the smallest English-speaking nation to ever qualify for the FIFA (Men) world cup soccer championships. This feat was followed up with qualifications for the FIFA U-17

and U-20 World Cups in 2007 and 2009, respectively. Trinidad and Tobago will host the FIFA (Women) U-17 World Cup Championships in 2010 after hosting the male version of this tournament in 2001(FIFA.COM, 2009).

While not as dominant as Trinidad and Tobago's football team, other sporting disciplines have also produced successful athletes on the international stage. At the 2009 World Track and Field Championships in Berlin Germany, Renny Quow and Josanne Lucas captured bronze medals in the 400m and 400m hurdle events, respectively. At the same meet, 17-year-old Jehue Gordon placed 4th in the 400m hurdles becoming the youngest ever finalist of any sprint event in the history of the World Track and Field Championships (Hunt, 2010). Trinidad and Tobago also gained two silver medals at the last Olympic Games in 2008. Richard Thompson placed second in the 100m and helped the men's relay team to second place in the 4x100m relay race (TTOC, 2009). Regionally, Trinidad and Tobago athletic team have also produced good results. In the 2007 Pan American Games in Brazil, the Trinidad and Tobago team returned with 1 silver and 3 bronze medals. Emile Abraham won silver in cycling while Cleopatra Borel-Brown (shot putt), George Bovell III (swimming) and Chinedum Osuji (tae kwon do) placed third in their respective events (TTOC, 2009).

Many athletes from Trinidad and Tobago attend colleges in the United States (US) and participate in Intercollegiate Athletics including Josanne Lucas (Auburn University), Cleopatra Borel-Brown (University of Maryland, Baltimore County), Richard Thompson (Louisiana State University) and Renny Quow (South Plains College) (TTOC, 2008). As these athletes complete their athletic

careers at colleges/universities in the US, many of them will interact with athletic trainers. For Trinidad and Tobago athletes participating n US intercollegiate athletics, the role of the athletic trainer will be a new addition to the sports team. The sports medicine system in Trinidad and Tobago is very different compared to the American sports medicine system, particularly athletic training. There are no athletic trainers in the high school system in Trinidad and Tobago; first-aiders are usually present for most competitions. Coaches and parents often serve as the first-aiders for these high school's athletic teams. The University of Trinidad and Tobago is the only educational institution staffed with sports medicine personnel. Many athletes in Trinidad and Tobago do not interact with a sports medicine specialist unless they are seriously injured; qualify to travel with a national team or join an international team such as a US collegiate team (Gulston, 2010). While there are physical therapists present in Trinidad and Tobago; there is not a strong athletic training presence. In fact, the NATA lists only two athletic trainers currently residing in Trinidad and Tobago. It is my belief that an increase in athletic trainers in Trinidad & Tobago will benefit the athletes and sports industry of Trinidad & Tobago. Any study that determines that athletes of Trinidad & Tobago perceive athletic training services as satisfactory and beneficial to their success as an athlete will support my belief that athletic trainers would have a positive impact on the athletes of Trinidad & Tobago.

Summary

Studies in patient satisfaction with athletic training services using patients of different cultural origins can help us explore the global role of the athletic trainer. Research suggests that athletes are satisfied with the services provided by athletic trainers (Unruh, 2005, 2007; Maresh & Peterson, 2007); however, none of the studies identified the cultural background of its subjects. Therefore, conducting a study with a recognized cultural group can help identify the satisfaction level of that group. More specifically, comparing Trinidad and Tobago student-athletes to US student-athletes on their satisfaction of athletic training services can help determine if athletes of Trinidad & Tobago have similar perceptions of athletic training services when compared to American athletes. This study can also help determine if Trinidad & Tobago athletes competing in intercollegiate athletics in the United States of America are satisfied with the athletic training services received from their athletic trainer.

CHAPTER 3

METHODS

Introduction

This chapter includes the following sections: research design, subjects, instrumentation, procedures, and data analysis for both study 1 and study 2.

Study 1

Research Design

This research study used a questionnaire to gather data; therefore, it was considered a cross-sectional design. The independent variable for the hypothesis was student-athletes' nationality (Trinidad & Tobago vs U.S.A). The independent variables for the exploratory questions were athletic divisions (NAIA/ NCAA Divisions) and sex of the athlete. The dependent variable for this study was student-athletes' level of satisfaction with athletic training services as measured by a questionnaire.

Subjects

A database of Trinidad & Tobago athletes competing in intercollegiate athletics in the United States of America was created by following intercollegiate athletics competition results of these athletes published in the print media of Trinidad & Tobago and searching the 2009-10 rosters of 100 colleges/universities in the US for athletes of Trinidad and Tobago decent. Some of the schools on the list were selected at random while others were either listed in the Trinidad & Tobago print media or found on the website socawarriors.net. The site socawarriors.net maintains a list of Trinidad & Tobago soccer player

currently attending and representing colleges/ universities in the USA. The colleges and players on the list were confirmed as current student-athletes by comparing the names with the varsity soccer team list of each university/college. All varsity teams from the schools identified were also searched for other Trinidad and Tobago athletes. This database of athletes offered a convenient sample of 190 Trinidad & Tobago athletes. Invitations to participate in Study 1 were sent to 161 Trinidad & Tobago student-athletes; 38 surveys were collected from this group. The student-athletes from Trinidad & Tobago had a response rate of 23%. A sample of USA athletes were created by asking the teammates of Trinidad & Tobago athletes to participate in the study. Participants were chosen from four conference divisions: NCAA I, NCAA II, NCAA III, and NAIA. After collecting the data, the statistical power was calculated for the number of responses received to determine the significant effect of the results of the study.

Instrumentation

The questionnaire used in this study was the same questionnaire used in the Unruh et al. (2005) study (see Appendix C). However, the demographic section was adjusted to include the subject's country of citizenship, the sex of the athletes' athletic trainer, the rank/title of the athletic trainer, the availability of the athletic trainer for travel to competitions and how often each athlete visited the athletic trainer. In addition, NCAA Division III and NAIA were added to the institutions competitive level. The questionnaire consists of 50 questions divided into two sections. The first section contained 35 questions designed to rank answers along a five point Likert scale, while the second section had 15

questions designed for "yes" or "no" responses. Unruh et al. (2005) developed the questions from material presented in each section of the Role Delineation Study. The author noted, *"that each question was constructed in a manner that best elicited responses reflective of the student-athlete's satisfaction with his or her athletic trainer and the services provided"* (Unruh et al., 2005). The questionnaire included questions that tested the satisfaction of athletic training services relative to the athletic trainer's knowledge of injuries, discretion, level of care and concern regarding the athletes' injury and if the athletic trainer was readily available to handle acute and chronic injuries.

The questionnaire used by Unruh et al. (2005) is a modification of the survey used in the initial study in 1998. Unruh (1998) established face and content validity for the instrument used in that study. Face validity was established by having certified athletic trainers review the instrument. The author established content validity by wording the questions to address job responsibilities identified by the Role Delineation Study (Unruh, 1998). Unruh (1998) also tested the questionnaire for reliability using two different types of reliablity analysis: a split-half test for internal consistency and a Cronbach coeffiecient α test. The results for the split-half test ($r=0.82$) and the Cronbach coeffiecient α test proved the instrument to be reliable ($\alpha=0.902$).

Data Collection Procedures

Prior to data collection, the Institutional Internal Review Board exempted this study from further review. Subjects were contacted via Facebook. Facebook is a social networking site with over 400 million users. Facebook reports that 50%

of its active users log on to the network each day (Facebook, 2010). On the Facebook web site, a Facebook event was created for potential subjects. Participants (n= 161) with accounts on Facebook were added to the event. Each participant that accepted the invitation to participate in the study was asked to add other US Intercollegiate athletes from Trinidad and Tobago to this event. On the page of the Facebook event, explicit instructions were posted (see Appendix D). For example, athletes were told that their participation in this study was voluntary and that they may choose to not respond to certain questions without being penalized. By completing and returning the online survey, it was implied that the athletes gave consent to participate in the study. The Facebook event page contained a hyperlink to the survey, which was hosted by surveymonkey.com. Facebook allowed the posting of a link to the questionnaire for access by the Facebook event group members. On completion of the questionnaire, each Trinidad and Tobago athlete was asked to forward the link to one/ two American teammate(s) or add that teammate to the Facebook group. This will ensure that the American athlete was matched on sport and sex.

Individual Facebook messages were sent to all members of the event group inviting them to participate in the study. Messages were also sent to selected persons asking them to forward the message containing the invitation to participate in this study to other Trinidad & Tobago athletes and also their teammates. Follow up messages were sent out via Facebook on May 1st, 2010. The questionnaire was available for completion for one month: April 5, 2010 at 12:00pm through May 7, 2010 at 12:00pm. The questionnaire was stored on

SurveyMonkey.com and was available 24 hours a day for the one month testing period. A link to the Survey Monkey questionnaire was placed on Facebook for easy access by the subjects.

Data Analysis

Demographic information and scores from the survey were summarized using descriptive statistics. The survey utilized numerical values for each Likert scale response along the 5-point Likert scale to quantify the responses of the participant. A point value of 5 represented *very satisfied,* a point value of 4, represented *moderately satisfied*, a point value of 3, represented *undecided/ neutral,* a point value of 2, represented *not satisfied,* and a point value of 1, represented *very dissatisfied* (Unruh 2005). A 'yes' response was weighted with a score of 2, and a 'no' response was weighted with a score of a 1 (Unruh 2005). The cumulative scores for each question were calculated as well as the total cumulative score for each athlete completing a questionnaire. A higher cumulative score represented a higher level of perceived satisfaction with athletic training services by the athlete(s). The mean cumulative scores of the questionnaire were calculated for each group (US athletes and Trinidad and Tobago athletes). A univariate analysis of variance (ANOVA) was performed to determine differences in the athletes' level of satisfaction with athletic training services according to country of origin (Trinidad & Tobago vs. US), athletic division (NCAA I, II, III, NAIA) and sex (male vs. female). The statistical significance level was set prior at $p<0.05$. The frequency of responses for each question was also calculated along with the mean and median value for each

question. Data was analyzed using the Statistical Package for the Social Sciences (SPSS) 17.0 software.

Study 2

Research Design

The research design of the second study was very similar to that of the first study. This study used the same questionnaire as the first study. The independent variables for this study were 1) sex of athletic trainer and 2) rank/ title of the athletic trainer. The dependent variable was the athletes' satisfaction with athletic training services as measured by the Athletic Training Patient Satisfaction Questionnaire. The athletes' sex, sport and division of play were controlled for this study.

Subjects

Subjects were recruited from field hockey teams competing in the NCAA Division I. The Associate Head Coach of field hockey at Michigan State University, Mrs. Helen Knull emailed the recruitment letter for Study 2 to all NCAA I field hockey coaches. The email also contained a link to electronic questionnaire located on surveymonkey.com. The coaches were asked to forward the email to their athletes. There are 1,678 field hockey student-athletes on the roster of 79 NCAA I teams. There were 163 surveys submitted in Study 2; the response rate was 10%.

Instrumentation

The questionnaire used in this study was the same as the one used in the first study. Only the demographics section was altered to accept more countries of citizenship and collect data on the athletic trainer.

Data Collection Procedures

The Associate Head Coach for field hockey at Michigan State University, Mrs. Helen Knull, was asked to send an email to all coaches and assistant coaches for Division I field hockey teams requesting their help in the completion of the Athletic Training Patient Satisfaction Questionnaire. The emailed contained a link to the questionnaire on survey monkey and asked the coaches to forward this link to the members of their field hockey teams. The data collected in study 2 was stored and analyzed separately to the data collected in the first study. The testing schedule for the second study was April 22 – May 18.

Data Analysis

The collected data was analyzed using the same methods as the first study. A univariate analysis of variance (ANOVA) was performed to determine differences in the athletes' level of satisfaction with athletic training services according sex (male vs. female) and experience of the athletic trainer. The statistical significance level was set prior at $p<0.05$. Data was analyzed using the Statistical Package for the Social Sciences (SPSS) 17.0 software.

CHAPTER 4

RESULTS

Introduction

In this chapter, you will find demographic data and the results of the statistical analysis performed on the data collected using the *Athletic Training Patient Satisfaction Questionnaire* for both studies. The results of this study will be presented in two parts: Study 1 and Study 2. The results of Study 1 will focus on the examination of the hypothesis and exploratory questions 1 and 2; while the results of Study 2 shall provide answers to exploratory questions 3 and 4.

Study 1

Demographic Data

At the end of the testing schedule, 54 subjects completed the Athletic Training Patient Satisfaction questionnaire. After perusal of the data, 16 athletes were excluded from data analysis due to the following: Country of citizenship (4), incomplete questionnaires (7), student-athletes from athletic divisions not included in study (4), the responses from NCAA Division III athletes were not analyzed as there was only one completed survey. The completed questionnaires of 38 student-athletes were analyzed in study 1. The majority of these athletes represented NCAA Division I (N=20), followed by NCAA II (N=12), and NAIA (N=6) (see Table 1). A total of 22 males and 16 females volunteered for the study (see Table 2). These student-athletes were members of several sports teams (field hockey, track & field, soccer, swimming/diving) and were at different years in their academic careers (see Table 3 and 4 respectively). Of the

38 student-athletes in the sample population, only 2 reported that they have never visited with their athletic trainer (see Table 5). The same number of male and female athletic trainers worked with the sample of student-athletes (see Table 6). Staff and graduate assistant athletic trainers were the popular representation of athletic trainers for this sample of student-athletes (see Table 7). Most of these athletic trainers traveled to all competitions (see Table 8).

TABLE 1: *Percentage of Trinidad and Tobago and American Student-Athletes in the Sample Population Representing NCAA Divisions*

NCAA Division	Number of Participants	Percent	Number of Participants	Percent
	Trinidad & Tobago		USA	
I	15	51.7%	5	55.6%
II	8	27.6%	4	44.4%
NAIA	6	20.7%	0	0.0%
TOTAL	29	100.0%	9	100.0%

TABLE 2: *Distribution of Student-Athletes according to Sex, Athletic Division and Country of Origin*

NCAA	Trinidad & Tobago Athlete		USA Athlete	
Division	Female	Male	Female	Male
I	5	10	2	3
II	3	5	4	0
NAIA	2	4	0	0
Total	10	19	6	3

TABLE 3: *Distribution of Athletes according to Sports Team, Sex and Country of Origin*

Sport Team	Trinidad & Tobago Athlete		USA Athlete	
	Female	Male	Female	Male
Field hockey	1	0	0	0
Track/Field	4	3	2	3
Soccer	3	16	4	0
Swimming/Diving	2	0	0	0
Total	10	19	6	3

TABLE 4: *Distribution of Athletes according to Year in School, Sex and Country of Origin*

Year In School	Trinidad & Tobago Athlete		USA Athlete	
	Female	Male	Female	Male
Graduated	1	2	0	0
1	0	3	0	0
2	2	3	2	3
3	2	5	2	0
4	5	4	2	0
5	0	2	0	0
Total	10	19	6	3

TABLE 5: *Distribution of Athletes according to Frequency of visits to their Athletic Trainer, Sex and Country of Origin*

Visits to ATC	Trinidad & Tobago Athlete		USA Athlete	
	Female	Male	Female	Male
Once per Week	3	5	1	1
2-3 visits Per Week	0	5	2	0
Once per Month	4	6	1	1
Everyday	3	2	1	1
Never	0	1	1	0
Total	10	19	6	3

TABLE 6: *Distribution of Athletes according to Athletic Trainer Sex, Athlete Sex and Country of Origin*

ATC Sex	Trinidad & Tobago Athlete		USA Athlete	
	Female	Male	Female	Male
Female	5	7	6	1
Male	5	12	0	2
Total	10	19	6	3

TABLE 7: *Distribution of Athletes according to Athletic Training Rank/ Title, Sex and Country of Origin*

Visits to ATC	Trinidad & Tobago Athlete		USA Athlete	
	Female	Male	Female	Male
Undergraduate AT Student	0	4	0	0
Graduate Assistant	5	2	4	1
Staff Athletic Trainer	4	12	2	2
Intern Athletic Trainer	0	0	0	0
Don't Know	1	1	0	0
Total	10	19	6	3

TABLE 8: *Distribution of Athletes according to Athletic Training Travel, Sex and Country of Origin*

Does Your ATC Travel to Competitions	Trinidad & Tobago Athlete		USA Athlete	
	Female	Male	Female	Male
Yes	4	13	5	3
No	5	3	0	0
Some Competitions	1	3	1	0
Total	10	19	6	3

Athletic Training Patient Satisfaction Questionnaire

The means for the responses for the Athletic Training Patient Satisfaction Questionnaire broken down by question and country exhibited a pattern of right skewness (See Appendix E). On a 5 point Likert scale (1=*very dissatisfied,* 2= *not satisfied,* and, 3=*undecided/ neutral,* 4= *moderately satisfied*, 5= *very satisfied*), more subjects selected the "4= *moderately satisfied* and 5= *very satisfied"* compared to the "1=*very dissatisfied,* 2= *not satisfied* "options. Also, the mean score of each independent variable group was above 80% (164) of the maximum achievable score with the exception of the NAIA athletic division which had a cumulative mean score of 164 (see Table 9). These results demonstrated a pattern of satisfaction among the student-athletes completing the questionnaires for this study for the athletic training services provided by their athletic trainer.

However, the results of a univariate analysis of variance revealed no significant difference between citizen (p=.50), NCAA Divisions (p=.461), and sex (p=.169) (see Table 9) of the athletes in their athletic trainer patient satisfaction. Specifically, hypothesis 1 was supported as there were no difference in level of satisfaction in athletic training services between US based student-athletes originating from Trinidad and Tobago and US student-athletes. However, exploratory questions 2 and 3 were not supported as there were no significant differences in the level of satisfaction in athletic training services between NCAA divisions and sex of the athlete. It should be noted that the observed power of the citizenship, NCAA division and sex was 0.101, 0.172 and 0.276 respectively.

TABLE 9: *Mean Scores for the independent Variable groups of Study 1*

Independent variables	Mean scores
Males	180.27
Females	166.38
TT	177.90
USA	158.38
NCAA 1	178.80
NCAA 2	173.00
NAIA	162.67

Study 2

Demographic Data

At the end of the testing schedule for Study 2, 10% subjects (n=163) completed the Athletic Training Patient Satisfaction questionnaire. After perusal of the data, 31 athletes were excluded from data analysis due to the following: incomplete questionnaires or responses from student-athletes who did not identify the rank/ title of their athletic trainer were not analyzed. The completed questionnaires of 81% of the field hockey respondents (n=132) were analyzed in Study 2. The student-athletes were at different years in their academic careers (see Table 10) and represented 6 countries with 92% of this population representing the US (see Table 11). Of the 132 student-athletes, 8% reported that they have never visited with their athletic trainer (see Table 12). There were more female athletic trainers than males (see Table 13) and most of these

athletic trainers (82%) traveled to all competitions (see Table 14). Staff (67%) and graduate assistant athletic trainers (22%) were the popular representation of athletic trainers for this sample of student-athletes (see Table 16).

TABLE 10: *Distribution of Athletes according to Year in School*

Years in School	1	2	3	4	5
Number of Athletes	37	44	35	15	1
Percentage of Athletes	28	33	27	11	1

TABLE 11: *Distribution of Athletes According to Country of origin*

Country	Number of Participants	Percent
Australia	2	2
Barbados	1	1
England	2	2
Netherlands	2	2
New Zealand	2	2
South Africa	1	1
USA	121	92

TABLE 12: *Distribution of Athletes according to Number of Visits to ATC*

Visits to ATC	Once per Week	2-3 Visits per Week	Everyday	Once per Month	Never
Number of Athletes	37	25	30	30	10
Percentage	28	19	23	23	8

TABLE 13: *Distribution of Athletes according to Sex of Athletic Trainer*

ATC Sex	Female	Male
Number of Athletes	96	36
Percentage	73	27

TABLE 14: *Distribution of Athletes according to Athletic Trainer Traveling to Competitions*

Does your ATC travel to all Competitions?	Yes	No	Some Competitions
Number of Athletes	108	9	15
Percentage	82	7	11

TABLE 15: *Distribution of Athletes according to Athletic Trainer Title*

ATC Title	Undergrad	Graduate Assistant	Staff ATC	Intern ATC
Number of Athletes	9	29	88	6
Percentage	7	22	67	5

Athletic Training Patient Satisfaction Questionnaire

Similarly to Study 1, the results for Study 2 also demonstrated a pattern of satisfaction among the student-athletes completing the questionnaires for the athletic training services provided by their athletic trainer. The cumulative mean score for the responses of each independent variable group was above 80% (164) of the maximum achievable score (see Table 16).

However, the univariate analysis of variance revealed no significant difference in the level of satisfaction in athletic training services between the sex of athletic trainers (p=.169), or according to the rank/ title of the athletic trainer (p=.297) (see Table 16). For the exploratory questions 3 and 4 no significant

difference in satisfaction with athletic training services were observed. The title (p.297) and sex (p=.169) of the athletic trainer did not affect the student –athlete level of satisfaction with their athletic trainers. It should be noted that the observed power of the athletic trainer rank/ title and athletic trainers' sex were 0.326 and.0069 respectively.

TABLE 16: *Mean Scores for the independent Variable groups of Study 2*

Independent variables	**Mean scores**
Males (ATC)	178.06
Females (ATC)	178.79
Athletic Training Student	175.11
Graduate Assistant ATC	188.31
Staff ATC	175.47
Intern ATC	182.67

CHAPTER 5

DISCUSSION

Introduction

The results of the Study 1 showed a pattern of satisfaction with athletic training services among the student-athletes completing the Athletic Training Patient Satisfaction Questionnaire. The null hypothesis for Study 1 was supported; no significant differences were found in the level of satisfaction with athletic training services among student-athletes from different countries: Trinidad and Tobago and USA. Furthermore, no significant differences in the level of satisfaction with athletic training services were observed between NCAA divisions, athletes' sex. Also, in Study 2 no significant differences in the level of satisfaction with athletic training services were observed between athletic trainers' sex or according the rank/ title of their athletic trainer.

Study 1

The results of the current study found that while the student-athletes were generally satisfied with athletic training services; there were no significant differences in satisfaction with these services between American student-athletes and Trinidad and Tobago student-athletes participating in US Intercollegiate athletics. Similarly, Unruh (1998), Unruh et al. (2005) and Maresh and Peterson (2007) also found a general pattern of student-athletes being satisfied with their athletic training services. However, no studies have explored the effect of cultural background on the perception of satisfaction with athletic training services.

There are several possible reasons why American student-athletes and Trinidad and Tobago student-athletes participating in US Intercollegiate athletics have similar levels of satisfaction with their athletic trainer. First, it may be possible that Trinidad and Tobago student-athletes are just as satisfied as American student-athletes due to both groups currently having access to this sports medical care. These athletes recognize the importance of having a professional to coordinate the healthcare services for the student-athletes. Second, athletic trainers are skilled professionals who complete a standardized educational process from an accredited program and pass a board certification program. The Commission on Accreditation of Athletic Training (CAATE) continuously monitors and evaluates athletic training education programs (ATEPS) to ensure that all accredited programs are following CAATE guidelines. Accredited athletic training education programs must follow CAATE's guidelines to maintain their accreditation. It can be assumed that certified athletic trainers will have similar knowledge and at least a minimal standard ability to perform their duties as an athletic trainer. Thus, athletes should show similar patterns in satisfaction with athletic training services. The practice of athletic training is also standardized as all certified athletic trainers are required to maintain the BOC Standards of Professional Practice. Specifically, Code 1.1 reads, "the athletic trainer of applicant renders quality patient care regardless of the patient's race, religion, age, sex, nationality, disability, social/ economic status or any other characteristic protected by law". Therefore, no significance difference in levels of

satisfaction with athletic training services should be observed between athletes of different nationalities.

The findings from this study also found no significant differences between the level of satisfaction in athletic training services between NCAA divisions. In concordance with these findings, Unruh (1998) and Unruh et al. (2005) did not find a significant difference between the athletic divisions in their studies. Specifically, according to Unruh (1998) and Unruh et al. (2005) all students-athletes who participated in their study belonged to low profile sport teams (soccer, track & field, field hockey, swimming); therefore, they should have similar perceptions of athletic training services. Also, as previously discussed, the perception of care should not vary much across athletic divisions as all athletic trainers should be providing a quality standard of care at all times.

No significant differences were observed in student-athlete's level of satisfaction with athletic training services according to the athlete' sex. In contrast to this study, Unruh (1998) found *"female athletes did not perceive their athletic trainers as positively as did other athletes"*. However, no numbers were given for females participating in low profile sports. Their results may have been biased by the female athletes completing in lower level profile sports. In the current study, all athletes belong to low profile sports which were determined by the requirements listed by Unruh (1998; 2005). Therefore, no difference in levels of satisfaction would be observed in the current study.

Study 2

In regard to athletic trainers' sex, there were no significant differences between the levels of satisfaction with athletic training services. In contrast, Drummond et al. (2007) found the athletes' comfort levels significantly varied between treatments by male and female athletic trainers. The differences in comfort levels were also specific to sex related injuries and conditions. However, the current study investigated student-athletes' satisfaction with the service provided by athletic trainers. There are no questions that examined the comfort level with the male athletic trainer compared to the female athletic trainer. There are also no questions that examined the student-athletes' satisfaction with the athletic training services when the injury or condition is sex specific. Moreover, Drummond et al. never questioned the student-athletes' level of satisfaction with the athletic training service. It is a possibility that an athlete can be uncomfortable when interacting and/ or receiving treatment from the athletic trainer, but satisfied with the outcome of the service.

Clinical Implications for Athletic Trainers and Athletes

As the NATA seeks to globalize the profession of athletic training; the results of the current study demonstrates that there may be a market for athletic trainers in Trinidad and Tobago. The results of this study showed that the student-athletes (US, Trinidad & Tobago) experienced a similar quality of athletic training services across sexes, citizenship (US, Trinidad & Tobago) and NCAA athletic divisions. Similarly to Ato Boldon, the student-athletes from Trinidad and Tobago demonstrated satisfaction with athletic training services. In comparison

to student-athletes from the US, there were no significant differences in this level of satisfaction. The results also lend support to the current athletic training education policies that are involved in the mass production of athletic trainers. Therefore, the athletic training service and education seems to be ready for exportation to Trinidad and Tobago.

Limitations of Study

One limitation of this study is that we had to rely on the honest and unbiased completion of the questionnaires by the student-athletes. The study was also limited as the Facebook event gathered poor support as many people either declined or simply ignored the invitation to join the event. Facebook messages were also sent to all potential subjects. However, Facebook has an anti-spam feature which alerted me that I was sending too many messages and threatened to shut down my Facebook account if I did not slow my messaging activity. This slowed down my recruitment of subjects but I was able to escape this feature by recruiting Trinidad and Tobago athletes to send emails to their peers on my behalf.

Although, the procedure for this study was easy to implement; the subject response was quite poor. The poor response achieved by this study was understandable as there was little or no incentive to join the Facebook event or complete the Athletic Training Patient Satisfaction Questionnaire. It easy for potential subjects to decline or ignore the invitation to participate in this study as a Facebook user receives many invitations every day on their account. However, I still believe that the procedures used in this study could work in future research,

but there is a definite need for strong incentive especially when the subject pool is not clearly defined. Research using a Facebook event to distribute questionnaires would work better if the study had subjects whom had already agreed to participate in the study or if there was someone at each location to follow up with the subjects.

We must also note that the observed power for each result was very poor. No power values were calculated before the commencement of this study. The study used a convenient sample which resulted in a small sample size. This small sample size will negatively affect the power of the study and increase the risk of a type 2 error. Thus, the results of this study cannot be applied to the general population represented by the sample. Also, each group within the independent variables contained a different number of subjects. This inequality between the groups could lead to an unequal weighting of the responses and a bias against the bigger groups

Future Research

There is need for the continuance of studies such as this one. Future researchers can continually evaluate the perception of the athletic training service across different populations including patients at clinics, high schools and universities/ clinics. As the world changes, studies like this one will also help the athletic training profession to stay current with the needs of its customers. This study could also be expanded to include more nationalities and investigate the interaction between different variables such as sex and low profile sports or athletic division and high profile sports.

Conclusions

The results of this study found that both groups of student-athletes (Trinidad & Tobago and United States of America) expressed similar satisfaction levels with athletic training services. As a result, athletic training may prosper in Trinidad and Tobago. In addition, the sex and experience of the athletic trainer do not seem to affect the level of satisfaction with athletic training services experienced by athletes from both Trinidad and Tobago and America. Finally, the NCAA Division I field hockey athletes exhibited satisfaction with athletic training services regardless of the athletic trainers sex or experience level.

APPENDICES

Table 17

Appendix A: *The Member Organizations of World Federation of Athletic Training and Therapy*

Name	Country
CHARTER MEMBERS	
Association of Chartered Physiotherapists in Sports Medicine	United kingdom
Biokinetics Association of South Africa	South Africa
Canadian Athletic Therapists' Association	Canada
Japan Sports Association	Japan
Japan Athletic Trainers' Organization	Japan
National Athletic Trainers' Association	USA
Taiwan (Republic of China) Athletic Trainers' Society	Taiwan (ROC)
MEMBERS	
Board of Certification (BOC)	USA
Federazione Italiana Fisioterapisti	Italy
Japan Athletic Trainers' Association for Certification	Japan

TABLE 17 (CONT'D)

Korean Association of Certified Exercise Professionals	Korea
Ontario Athletic Therapists' Association	Canada
Spanish Association of Sport Nurses	Spain
Society of Tennis Medicine and Science	
University of Bedfordshire	United Kingdom
Korean Athletic Trainers' Association	Korea
Japan Amateur Sports Association	Japan
EDUCATIONAL INSTITUATION MEMBERS	
The University of Texas Health Science Center at San Antonio	USA
Purdue University	USA
Weber State University	USA
University of Wisconsin - La Crosse	USA

Table 18

Appendix B: *Trinidad & Tobago Olympic Committee's Affiliation with 37 Organizations*

SPORT	AFFILIATE
ATHLETICS	National Amateur Athletics Association of Trinidad & Tobago
BALLROOM DANCING	National Ballroom Dance Association of Trinidad & Tobago
BADMINTON	Trinidad & Tobago Badminton Association
BASKETBALL	National Basketball Federation of Trinidad & Tobago
BOBSLEIGH	Trinidad & Tobago Bobsleigh Federation
BOXING (Amateur)	Trinidad and Tobago Amateur Boxing Association
CANOE/Kayak	Trinidad & Tobago Canoe/Kayak Association
CONTRACT BRIDGE	Trinidad & Tobago Contract Bridge Association
CHESS	Trinidad & Tobago Chess Association
CRICKET	Trinidad & Tobago Cricket Board
CUE SPORTS	Trinidad & Tobago Cue Sports Foundation
CYCLING	Trinidad & Tobago Cycling Federation
DARTS	Trinidad & Tobago Darts Association
EQUESTRIAN	Trinidad & Tobago Equestrian Association
FIGURE SKATING	Trinidad & Tobago Figure Skating Association
FOOTBALL	Trinidad & Tobago Football Federation
GYMNASTICS	Trinidad & Tobago Gymnastics Association
HOCKEY	Trinidad & Tobago Hockey Board
JUDO	Trinidad & Tobago Judo Association
KARATE	Trinidad & Tobago Karate Union
NETBALL	Trinidad & Tobago Netball Association Inc.
PARALYMPICS	Paralympic Organization of Trinidad and Tobago
PIGEON RACING	National Pigeon Racing Commission of Trinidad and Tobago
RIFLE	Trinidad Rifle Association
RUGBY FOOTBALL	Trinidad & Tobago Rugby Football Union
SAILING	Trinidad & Tobago Sailing Association
SNOWSPORTS	Trinidad & Tobago Snowsports Federation
SQUASH	Trinidad & Tobago Squash Association

Table 18 (Cont'd)

SWIMMING	Amateur Swimming Association of Trinidad and Tobago
TABLE TENNIS	Trinidad & Tobago Table Tennis Association
TAE KWON DO	TAE KWON DO
TARGET ARCHERY	Trinidad and Tobago Target Archery Federation
TENNIS	Tennis Association of Trinidad and Tobago
TRIATHLON	Trinidad and Tobago Triathlon Association
VOLLEYBALL	Trinidad and Tobago Volleyball Federation
WEIGHTLIFTING	Trinidad and Tobago Weightlifting Association
WUSHU	Wushu Association of Trinidad and Tobago

Appendix C*: Athletic Training Patient Satisfaction Questionnaire (Provided through kind courtesy of Dr. Scott Unruh)*

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. Answering this questionnaire indicates your consent to participate.

Indicate Country of citizenship (please select one)

Trinidad & Tobago USA Other_____

Sport in which you participate (please select one)

Track & Field
Soccer (football)
Swimming
Field Hockey
Basketball
Other _____

Year in School (please select one) _____

1 2 3 4 5

What is your sport's athletic division (please select one)

NCAA Division I NCAA Division II NCAA Division III NAIA Other

Sex (please select one) Male Female

How often do you visit your athletic trainer? (please select one)

1 x Week
2-3 times per week
1 per month
Every day
Never

What is the sex of the athletic trainer who is in charge of your sport?(please select one)

Male Female I don't have an athletic trainer

My athletic Trainer is _____(please select one)

Undergraduate Student
Graduate Student
Intern
Staff (not in school)
N/A

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

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

(1) I am _____with the quality of care provided by my athletic trainer.

VS MS U NS VD

(2) I am _____ with the courtesy shown to me as an athlete by my athletic trainer.

VS MS U NS VD

(3) I am _____ that my athletic trainer provides a safe environment.

VS MS U NS VD

(4) I am _____ with the knowledge demonstrated by my athletic trainer regarding my injuries.

VS MS U NS VD

(5) I am _____ with the terms my athletic trainer uses when explaining my injury to me.

VS MS U NS VD

(6) I am _____ with the level of confidentiality demonstrated by my athletic trainer concerning my medical information. .

VS MS U NS VD

(7) I am _____ with my athletic trainers' method for proper rehabilitation of athletic injuries.

VS MS U NS VD

(8) I am _____ that the answers to my questions provided to me by my athletic trainer are accurate.

VS MS U NS VD

(9) I am _____ that my athletics trainer views each injury equally important.

VS MS U NS VD

(10) I am _____ with how my athletic trainer demonstrates appropriate concern for my feelings and emotions following an injury.

VS MS U NS VD

(11) I am _____ with amount of time it takes for an athletic trainer to approach me for consultation once I enter the athletic training room.

VS MS U NS VD

(12) I am _____ with the level of concern my athletic trainer expresses about each injury regardless of how many I have had in the past.

VS MS U NS VD

(13) I am _____ with my athletic trainers' initial response time to my injury during a practice or game.

VS MS U NS VD

(14) I am _____ that the location of my athletic trainer during practice is such that he/she is capable of responding quickly and properly to an injury.

VS MS U NS VD

(15) I am _____ with the athletic training room hours prior to practice/competition.

VS MS U NS VD

(16) I am _____ with my athletic trainers control of emergency situations.

VS MS U NS VD

(17) I am _____ with my athletic trainers utilization of other athletic trainers or other medical professionals when he/she is unsure of an injury.

VS MS U NS VD

(18) I am _____ with my athletic trainers' explanation of the opinions provided by the physician.

VS MS U NS VD

(19) I am _____ with the time lapsed between when I am referred to see a physician until the time I see the physician.

VS MS U NS VD

(20) I am _____ with the clarity of language in which my athletic trainer uses when explaining the nature of my injury to me.

VS MS U NS VD

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

VS MS U NS VD

(22) I am _____ with the quality of care provided to each athlete no matter what gender they are.

VS MS U NS VD

(23) I am _____ that the time my athletic trainer takes to get to practice is appropriate to provide proper medical supervision.

VS MS U NS VD

(24) I am _____ with the amount of medical supplies provided for use by athletic trainers.

VS MS U NS VD

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

VS MS U NS VD

(26) I am _____ with the availability of my team physician.

VS MS U NS VD

(27) I am _____ with the time it takes from when I get injured until the time the coaching staff is aware of my injury.

VS MS U NS VD

(28) I am _____ with the conduct in which my athletic trainer carries him/herself.

VS MS U NS VD

(29) I am _____ with the rehabilitation techniques provided to me by my athletic trainer.

VS MS U NS VD

(30) I am _____ with the level of respect my athletic trainer gives me.

VS MS U NS VD

(31) I am _____ with the assessment process my athletic trainer uses to evaluate my injuries.

VS MS U NS VD

(32) I am _____ with the treatment my athletic trainer uses to rehabilitate my injury.

VS MS U NS VD

(33) I am _____ with how my athletic trainer communicates with my coaching staff about my illness or injury condition.

VS MS U NS VD

(34) I am _____ with the amount of time spent from injury onset to when I see an appropriate medical professional.

VS MS U NS VD

(35) I am _____ with my athletic trainer's skill in various taping and wrapping techniques.

Please select 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

Appendix D: *Recruitment Letter*

Dear Student-Athlete:

I am a Michigan State University master's degree candidate from the Republic of Trinidad & Tobago. I am requesting your assistance to complete my thesis titled: "Does the Country of Origin of Collegiate Student-Athletes' affect their Satisfaction with Athletic Trainers: Trinidad & Tobago Athletes vs USA Athletes". To assess how the collegiate student-athletes' country of origin affects their satisfaction with athletic training services; an Athletic Training Patient Satisfaction Questionnaire will be distributed to collegiate student-athletes across the US. The questionnaire contains 59 questions: 9 introduction questions, 35 questions designed to accept answers on a 5 point Likert scale and 15 questions with "yes" or "no" answers. The questionnaire is based on the Board of Certification Delineation Study which describes the services an athletic trainer should provide to their athlete/ patient.

There are no identifying questions on this survey. Your responses will be returned to the survey website as anonymous data. You will indicate your voluntary agreement to participate in this research by completing and submitting the survey. If you choose to participate you may chose to not answer certain questions or withdraw at any time without consequence. You must be 18 or older to participate in this research study.

Please click on the link below to begin the survey. The survey will take you approximately **10 minutes to complete**. Your participation in this study is confidential. The results of this study may be published in a peer-reviewed journal; however any information that could identify you will not be included. This study has been approved by the human subjects committee at Michigan State University. Any questions about this study may be addressed to either myself or to the undergraduate Athletic Training Program Director, Dr. Tracey Covassin, Ph.D., ATC at 517-353-2010. Thank you for your participation and support.

https://www.surveymonkey.com/s

Sincerely,

Jason Pilgrim, ATC

Graduate Assistant

Michigan State University

pilgrimj@msu.edu

Table 19

Appendix E: *The means for the Athletic Training Patient Satisfaction Questionnaire broken down by question and country*

Question 1								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.34	0.77	0	1	2	12	14
USA	9	4.11	1.05	0	1	1	3	4
Question 2								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.52	0.95	1	1	0	7	20
USA	9	4.22	0.97	0	1	0	4	4
Question 3								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.62	0.56	0	0	1	9	19
USA	9	4.33	1.00	0	1	0	3	5
Question 4								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.17	0.97	0	3	2	11	13
USA	9	4.22	1.09	0	1	1	2	5
Question 5								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.45	0.74	0	1	1	11	16
USA	9	4.22	0.97	0	1	0	4	4
Question 6								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.24	1.06	0	3	4	5	17
USA	9	4.22	0.97	0	1	0	4	4

NOTE:
VD=*very dissatisfied,* NS= *not satisfied,* U=*undecided/ neutral,*
MS= *moderately satisfied*, VS= *very satisfied*)

Table 19 (Cont'd)

Question 7								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	28	4.11	0.96	0	3	2	12	11
USA	9	3.89	1.45	1	1	0	3	4
Question 8								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	27	4.19	0.74	0	1	2	15	9
USA	9	4.11	1.27	0	2	0	2	5
Question 9								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.07	1.03	0	2	8	5	14
USA	9	3.44	1.33	1	1	2	3	2
Question 10								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.14	1.06	0	4	2	9	14
USA	9	4.00	1.00	0	1	1	4	3
Question 11								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.00	1.13	0	6	0	11	12
USA	9	3.89	1.17	0	2	0	4	3
Question 12								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.24	0.95	0	2	4	8	15
USA	9	4.11	1.05	0	1	1	3	4
Question 13								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.28	0.96	0	3	1	10	15
USA	9	3.56	1.33	0	3	1	2	3

NOTE:
VD=*very dissatisfied,* NS= *not satisfied,* U=*undecided/ neutral,*
MS= *moderately satisfied*, VS= *very satisfied*)

Table 19 (Cont'd)

Question 14								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.48	0.83	0	2	0	9	18
USA	9	4.00	1.12	0	1	2	2	4
Question 15								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.31	0.66	0	1	0	17	11
USA	9	3.56	1.24	0	3	0	4	2
Question 16								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.52	0.63	0	0	2	10	17
USA	9	4.00	1.00	0	1	1	4	3
Question 17								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.48	0.78	0	0	5	5	19
USA	9	3.78	1.2	0	2	1	3	3
Question 18								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.48	0.83	0	1	3	6	19
USA	9	4.00	1.00	0	1	1	4	3
Question 19								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.00	1.04	1	2	3	13	10
USA	9	3.44	1.51	1	2	1	2	3
Question 20								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.48	0.69	0	0	3	9	17
USA	9	4.11	0.93	0	1	0	5	3

NOTE:
VD=*very dissatisfied,* NS= *not satisfied,* U=*undecided/ neutral,*
MS= *moderately satisfied*, VS= *very satisfied*)

Table 19 (Cont'd)

Question 21								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.07	1.22	0	6	2	5	16
USA	9	3.67	1.32	0	3	0	3	3
Question 22								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.41	0.78	0	1	2	10	16
USA	9	3.78	1.39	0	3	0	2	4
Question 23								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.38	0.86	0	2	1	10	16
USA	9	4.00	1.22	0	2	0	3	4
Question 24								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.38	0.98	0	3	1	7	18
USA	9	3.89	1.45	1	1	0	3	4
Question 25								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.21	0.82	0	2	1	15	11
USA	9	3.67	1.58	1	2	0	2	4
Question 26								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	3.79	0.94	0	4	4	15	6
USA	9	3.25	1.49	1	2	1	2	2
Question 27								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.41	0.87	0	2	1	9	17
USA	9	3.78	1.09	0	2	0	5	2

NOTE:
VD=*very dissatisfied,* NS= *not satisfied,* U=*undecided/ neutral,*
MS= *moderately satisfied*, VS= *very satisfied*)

Table 19 (Cont'd)

Question 28								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.55	0.74	0	1	1	8	19
USA	9	4.22	0.97	0	1	0	4	4
Question 29								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.38	0.78	0	1	2	11	15
USA	9	3.78	1.39	1	1	0	4	3
Question 30								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.66	0.55	0	0	1	8	20
USA	9	4.56	0.53	0	0	0	4	5
Question 31								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.52	0.63	0	0	2	10	17
USA	9	3.89	1.45	1	1	0	3	4
Question 32								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.26	0.81	0	1	3	11	12
USA	9	3.89	1.45	1	1	0	3	4
Question 33								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	28	4.07	0.98	0	3	3	11	11
USA	9	3.78	1.20	0	2	1	3	3
Question 34								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.17	0.89	0	2	3	12	12
USA	9	3.78	1.20	0	2	1	3	3

NOTE:
VD=*very dissatisfied,* NS= *not satisfied,* U=*undecided/ neutral,*
MS= *moderately satisfied*, VS= *very satisfied*)

Table 19 (Cont'd)

Question 35								
Country	**N**	**Mean**	**SD (+/-)**	**VD**	**NS**	**U**	**MS**	**VS**
Trinidad & Tobago	29	4.59	0.73	0	1	1	7	20
USA	9	4.33	1.00	0	1	0	3	5
Question 36								
Country	**N**	**Mean**	**SD (+/-)**		**Yes**	**No**		
Trinidad & Tobago	29	1.90	0.31		26	3		
USA	9	1.89	0.33		8	1		
Question 37								
Country	**N**	**Mean**	**SD (+/-)**		**Yes**	**No**		
Trinidad & Tobago	29	1.90	0.31		26	3		
USA	9	1.89	0.33		8	1		
Question 38								
Country	**N**	**Mean**	**SD (+/-)**		**Yes**	**No**		
Trinidad & Tobago	29	1.83	0.38		24	5		
USA	8	1.75	0.46		6	2		
Question 39								
Country	**N**	**Mean**	**SD (+/-)**		**Yes**	**No**		
Trinidad & Tobago	29	1.9	0.31		26	3		
USA	9	2.00	0.00		9	0		
Question 40								
Country	**N**	**Mean**	**SD (+/-)**		**Yes**	**No**		
Trinidad & Tobago	28	1.86	0.36		24	4		
USA	9	2.00	0.00		9	0		
Question 41								
Country	**N**	**Mean**	**SD (+/-)**		**Yes**	**No**		
Trinidad & Tobago	29	1.83	0.38		24	5		
USA	9	1.78	0.44		7	2		

NOTE:
VD=*very dissatisfied,* NS= *not satisfied,* U=*undecided/ neutral,*
MS= *moderately satisfied*, VS= *very satisfied*)

Table 19 (Cont'd)

Question 42					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.90	0.31	26	3
USA	9	1.78	0.44	7	2
Question 43					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.90	0.31	26	3
USA	8	1.88	0.35	7	1
Question 44					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.93	0.26	27	2
USA	9	1.78	0.44	7	2
Question 45					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.79	0.41	23	6
USA	9	1.33	0.50	6	3
Question 46					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.86	0.35	25	4
USA	9	1.67	0.50	6	3
Question 47					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	28	1.79	0.42	22	6
USA	9	1.89	0.33	8	1
Question 48					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.79	0.41	23	6
USA	9	1.67	0.50	6	3

Table 19 Cont'd

Question 49					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.93	0.26	27	2
USA	9	1.67	0.50	6	3
Question 50					
Country	**N**	**Mean**	**SD (+/-)**	**Yes**	**No**
Trinidad & Tobago	29	1.83	0.38	24	5
USA	9	1.56	0.53	5	4

REFERENCES

Aharony, L., & Strasser, S. (1988, September 23). *Sage Journals Online* . Retrieved March 11, 2009, from Sage Website: http://mcr.sagepub.com

Andersen, M., Hall, S., & Martin, M. (2004). Sports Injury Care and the Athletic Trainer. In M. Andersen, S. Hall, & M. Martin, *Foundations of Athletic Training: Prevention, Assessment, and Management; 3rd Editio* (pp. 3 - 17). Baltimore: Lippincott Williams and Wilkins.

BOC. (2006, 1 1). *BOC Standards of Professional Practice*. Retrieved 12 12, 2009, from Board of Certification: http://www.bocatc.org/images/stories/multiple_references/standardsprofessionalpractice.pdf

Boldon, A. (2005, 11 5). (J. Pilgrim, Interviewer)

Boldon, Ato. (n.d.). *AtoBoldon.com*. Retrieved 12 12, 2009, from Ato Boldon Website: http://www.atoboldon.com/aboutato/aboutato_1995.asp

CAATE. (2009, 09 09). *About CAATE.* Retrieved 1 25, 2010, from CAATE Website: http://caate.net/dynamic/about_us_menu.html

CAHPS. (2008, 12 15). *CAHPS:AHRQ*. Retrieved 2 14, 2010, from AHRQ Website: https://www.cahps.ahrq.gov/content/cahpsOverview/OVER_Intro.asp?p=101&s=1

Central Intelligence Agency. (n.d.). *The World Factbook*. Retrieved 12 12, 2009, from https://www.cia.gov/library/publications/the-world-factbook/geos/td.html

Cleary, P. (1999, September 18). The Increasing Importance of Patient Surveys. *British Medical Journal* , pp. 720-721.

Commission on Accreditation of Athletic Training Education. (n.d.). Retrieved 12 12, 2009, from CAATE Website: http://caate.net/

Delforge, G., & Behnke, R. (1999). The history and evolution of athletic training education in the United States. *Journal of Athletic Training* , 53-61.

Donabedian. (1988). The Quality of Care: How Can It Be Assessed? *JAMA* , 1743-1748.

Drummond, J., Hostetter, K., Laguna, P., Gillentine, A., Del Rossi, G. (2007). Self-Reported Comfort of Collegiate Athletes with Injury and Condition Care by Same-Sex and Opposite-Sex Athletic Trainers. *Journal of Athletic Training* , 53-112.

Ebel, R. (1999). *Far beyond the shoe box: 50 years of the NATA.* New York: Forbes.

Facebook. (2010). *Statistics: Facebook.* Retrieved 2 14, 2010, from Facebook: http://www.facebook.com/press/info.php?statistics

Ferrara, M. (2006). Globilization of the Athletic training Profession. *Journal of Athletic Training* , 135-137.

FIFA.COM. (n.d.). *FIFA U-17 Women's World Cup Trinidad and Tobago 2010.* Retrieved 1 24, 2010, from FIFA.COM: http://www.fifa.com/u17womensworldcup/destination/hostcountry/index.html

Gulston, O. (2010, 01 19). Sports Medicine in Trinidad and Tobago. (J. Pilgrim, Interviewer)

Haskell, D., & Brown, H. (1998, September). Calling All Patients. *Nursing Management* , pp. 39-40.

Hunt, G. (2010, 1 2). *Minister of Sport NAAA Awards speech.* Retrieved 1 24, 2010, from Ministry of Sport and Youth Affairs: http://msya.gov.tt/home/images/stories/Pdf3/speech-naaa%20awards-2jan10.pdf

IAAF. (2009). Retrieved 12 12, 2009, from IAAF Website: http://www.iaaf.org/athletes/biographies/letter=0/athcode=9066/index.html

Kutz, M. (2010). *Leadership and management in athletic training.* Philadelphia: PA.

Maresh, N., & Peterson, A. (2007). Student Athlete Satisfaction with UW-Eau Claire Athletic Training Services. *Research Journal of the Department of Kinesiology* , 27-43.

McKain, C. (2008, 12 18). *Rec.Sport.Soccer Statistics Foundation Caribbean Cup Championships.* Retrieved 01 24, 2010, from Rec.Sport.Soccer Statistics Foundation: http://www.rsssf.com/tabless/shellcar.html

NATA. (2010b). *January 2010 NATA membership by class and district.* Retrieved February 02, 2010, from National Athletic Trainers' Association Website: http://www.nata.org/members1/documents/membstats/2010.htm

NATA. (2010a). *Worksettings: NATA*. Retrieved 2 14, 2010, from NATA Website: http://nata.org/about_AT/worksettings.htm

NATA. (2009a). *Athletic Training Terminology*. Retrieved 12 12, 2009, from National Athletic Training Association: http://www.nata.org/about AT/terminology.htm

NATA. (2009b). *What is an Athletic Trainer*. Retrieved 12 12, 2009, from National Athletic Training Association Website: http://www.nata.org/about_AT/whatisat.htm

NATA (2009c). *What is NATA*. Retrieved 12 12, 2009, from http://www.nata.org/about_NATA/what_is_nata.htm

Pitney, W., & Parker, J. (2001). Qualitative Inquiry in Athletic Training: Priciples, Possibilities, and Promises. *Journal of Athletic Training* , 185-189.

Prentice, W. (2010). The Athletic Trainer and the Sports Medicine Team. In W. Prentice, *Arnheim's Principles of Athletic Training; 11th Edition* (pp. 2 - 39). New York: McGraw-Hill Higher Education.

Program, C. U. (2010). Retrieved March 1, 2010, from http://www.chapman.edu/ces/atep/

Soca Warriors Online. (n.d.). Retrieved 12 12, 2009, from Soca Warriors Online Website: http://www.socawarriors.net/foreign-based/us-college-players.html

Starkey, C., & Ryan, J. (2002). The Injury Evaluation Process. In C. Starkey, & J. Ryan, *Evaluation of Orthopedic and Athletic Injuries, 2nd Edition* (p. 26). Philadelphia: F.A. Davis Company.

The Picker Institute. (2010). *About NRC + Picker*. Retrieved 2 12, 2010, from The Picker Institute Website: http://www.pickerinstitute.org/about/aboutpickerandnrc.html

Trinidad and Tobago Olympic Committee. (n.d.). *Trinidad and Tobago Olympic Committee Affiliates*. Retrieved 01 24, 2010, from Trinidad and Tobago Olympic Committee: http://www.ttoc.org/GeneralInfo.aspx?id=3

TTOC. (2009, 04 29). *TTOC 2009 nAnnual Report*. Retrieved 01 24, 2010, from TTOC: http://www.ttoc.org/Uploads/2008-2009AnnualReport.pdf

TTOC. (2008). *TTOC Athletes*. Retrieved 1 24, 2010, from TTOC: http://www.ttoc.org/Athletes.aspx

University of Wisconsin-Eau Claire. (n.d.). *Quick Facts*. Retrieved 12 12, 2009, from University of Wisconsin-Eau Claire Blugolds Website: http://www.uwecblugolds.com/?view=facts

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., Marta, M., & Seshadri, S. (2005, March). Collegiate Student-Athletes' Satifaction with Athletic Trainers. *Journal of Athletic Training* , 52-55.