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An Investigation of the Relationships Between Leadership Practices of Undergraduate Athletic Training Program Directors and Program Performance on the BOC Examination

Jacqueline Durst

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AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN LEADERSHIP PRACTICES
OF UNDERGRADUATE ATHLETIC TRAINING PROGRAM DIRECTORS
AND PROGRAM PERFORMANCE ON THE BOC EXAMINATION

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

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Title: An Investigation of the Relationships Between Leadership Practices of Undergraduate Athletic Training Program Directors and Program Performance on the BOC Examination

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This descriptive study investigates the relationships between athletic training students' perceptions of their undergraduate program director's leadership behaviors (model, inspire, challenge, enable, and encourage) and overall athletic training program success (measured by the Board of Certification examination performance specifically program first-attempt pass rates). The study attempts to recognize relationships and define specific leadership behaviors of program directors within their educational programs using a 360-feedback assessment. Data from 86 participants were collected using a 30-item assessment that allows participants the ability to subjectively and objectively report the frequency of an individual's leadership behaviors. Findings from this study show a statistically significant influence between athletic training student perceptions of their program director demonstrating all 5 leadership practices (model, inspire, challenge, enable, and encourage) and satisfactory BOC exam pass rates, as analyzed by a Pearson Correlation Coefficient, and statistically significant influences between all 5 leadership practices and gender, as measured by an Independent Samples t test. Findings also show leadership practice model was significantly predictive of athletic training student first attempt pass rates, as analyzed by a Stepwise Linear Regression. A one-way ANOVA found statistically significant associations between athletic training students' perceptions of their program directors' leadership behaviors and NCAA Division-I institution. Students from a NCAA Division-I institution reported significantly higher program director leadership practices scores.

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Dedication

This work is dedicated to my family. To my husband Nicholas, my “babysitters” John, Sandy, and my parents Bill and Dee, thank you for believing in me and supporting me. To my children, Brock and Addison, thank you for understanding and allowing me to work on “doctor school”.

I would also like to dedicate this work to athletic training mothers who make sacrifices every day to support their families and who strive to be the best role models for their children. Here’s to Athletic Training Moms: We do it all!

Jeremiah 29:11 | Philippians 4:13

TABLE OF CONTENTS

Chapter		Page
1	INTRODUCTION	1
	Athletic Training Leadership	3
	Statement of the Problem.....	8
	Purpose of the Study	10
	Theoretical Framework.....	11
	Significance of the Study	13
	Research Design.....	14
	Research Questions	14
	Hypotheses	15
	Assumptions and Limitations	16
	Definition of Terms.....	17
	Expected Findings.....	19
	Organization of the Remainder of the Study	20
2	REVIEW OF THE LITERATURE	21
	Athletic Training Education Background	21
	Athletic Training Education Program Delivery	27
	Athletic Training Education Program Personnel	29
	The Athletic Training Education Program Director	31
	Leadership Theories.....	34
	Transformational Leadership Theory	36
	Kouzes' and Posner's Leadership Theory	39
	Situational Leadership Theory	42
	Trait Leadership Theory	44
	Leadership in Athletic Training	46
	Preceptor Leadership	50
	Program Director Leadership.....	52
	Summary	55
3	METHODOLOGY	56
	Research Questions	57
	Null Hypotheses.....	58
	Research Design.....	59
	Participant Selection	60
	Setting	60
	Materials	61
	Instrument	61
	Equipment.....	62

Chapter	Page
	Procedures63
	Data Analysis64
	Expected Findings.....66
4	RESULTS67
	Description of Participants.....70
	Quantitative Data71
	Research Question 175
	Research Question 279
	Research Question 2a.....82
	Research Question 384
	Research Question 489
	Research Question 4a.....93
	Research Question 596
	Summary of Results106
	Details of Analysis and Results106
	Conclusion109
5	DISCUSSION110
	Summary of Results.....112
	Research Question 1112
	Research Question 2115
	Research Question 2a.....117
	Research Question 3118
	Research Question 4121
	Research Question 4a.....123
	Research Question 5126
	Discussions and Conclusions.....129
	Recommendations.....130
	For Practice130
	For Future Research.....132
	Limitations133
	Summary134
	REFERENCES135
	APPENDICES145
	Appendix A – Cover Letter (E-mail) to Program Directors145
	Appendix B – Research Participant Informed Consent Form: LPI- Observer.....148

Chapter	Page
Appendix C – Research Participant Informed Consent Form: LPI Self	150
Appendix D – Program Director (Leader) Instructions for Completing LPI 360 Online.....	152
Appendix E – Athletic Training Student Instructions for Completing LPI 360 Online.....	154

LIST OF TABLES

Table		Page
1	Athletic Training Undergraduate Program Director Leadership Behaviors Organized by Practice.....	68
2	Demographic Characteristics of Undergraduate Athletic Training Education Program Participants.....	70
3	Most Frequently Used Leadership Behavior Scores: Program Directors (PD) v. Athletic Training Students (ATS) Perspectives	73
4	Descriptive Statistics for Perceived Leadership Practices Reported by Program Directors (PD) and Athletic Training Students (ATS).....	76
5	Levene’s Test for Leadership Practices Reported by Program Directors and Athletic Training Students	77
6	Independent-Samples t Test for Perceived Leadership Practices Reported by Program Directors and Athletic Training Students.....	78
7	Pearson Correlation among Students’ Perceptions of Leadership Practices and Athletic Training Programs’ Board of Certification (BOC) Exam Pass Rates (PR).....	80
8	Pearson Correlation among Program Directors’ Self-Reported Leadership Practices and Athletic Training Programs’ Board of Certification (BOC) Exam Pass Rates (PR).....	83
9	Descriptive Stats for Perceived Leadership Practices Reported by Program Directors (PD) and Athletic Training Students (ATS) Compared to 3-Year Aggregate Pass Rates (PR)	85
10	Stepwise Linear Regression for Athletic Training Student Perspectives of Program Director Leadership Behaviors and 2014-2015 First Attempt Board of Certification Exam Pass-Rate (PR).....	87
11	Simple Linear Regression for Athletic Training Student Perspectives of Program Director Leadership Behaviors and 3-year Board of Certification Pass Rate Aggregate (PR).....	88
12	Descriptive Stats for Male and Female Program Director (PD) Leadership Practice Scores Perceived by Athletic Training Students	90

Table	Page
13	Independent-Samples <i>t</i> Test for Program Director Leadership Practices by Gender as Perceived by Athletic Training Students92
14	Descriptive Statistics for Leadership Practice Scores Perceived by Program Directors (PD) and Athletic Training Students by Gender94
15	Independent-Samples <i>t</i> Test for Program Director Self-Reported Leadership Practices by Gender.....95
16	Descriptive Statistics for Athletic Training Student Leadership Practice Inventory Scores and National Collegiate Athletic Association (NCAA) University Division98
17	Pearson Correlation between Athletic Training Programs' BOC Pass Rates and Athletic Training Student (ATS) GPA Scores99
18	Test of Homogeneity of Variance of Athletic Training Student Leadership Practice Scores When Grouped by Institution Size101
19	Robust Tests of Equality of Means of Athletic Training Student Leadership Practice Scores When Grouped by Institution Size102
20	Analysis of Variance (ANOVA) Between Athletic Training Student-Reported Leadership Practice Inventory Scores and Program Board of Certification (BOC) Exam Pass Rates by Institutional Size103
21	Multiple Comparisons of Athletic Training Student Leadership Practice Inventory Scores and National Collegiate Athletic Association (NCAA) University Division105

CHAPTER 1

INTRODUCTION

Athletic training education has experienced over fifty years of reform to efficiently prepare individuals for the allied health care profession (Delforge & Behnke, 1999). During this time, the expanding roles and responsibilities of athletic training educators in colleges and universities has developed into a complex, multifaceted position (Judd & Perkins, 2004). Two methods once existed for obtaining a national certification in athletic training; a curriculum based route and an internship based route. The curriculum based program consisted of a variety of course work and a minimum requirement of 800 hours of clinical education experience; as opposed to the internship program that required a minimum of 1500 hours of clinical education experience and limited coursework (Delforge & Behnke, 1999). Athletic training educators were often torn between two positions simultaneously. As clinicians, athletic trainers are responsible for the health care of athletes within the Athletic department, yet they also may hold specific duties within the Academic departments, such as teaching, mentoring, and researching (Magnus, 1998). Changing roles created new challenges for athletic training educators. Athletic training program directors were responsible for developing and maintaining an entire education program with little leadership training or administrative preparation. Leadership research within athletic training education is lacking compared to other allied health care fields (Kutz, 2012). As athletic training education continues to grow, so does the need for leadership education and practice.

The 1990s and 2000s contributed additional milestones for athletic training such as recognition as an allied health care profession by the American Medical Association (AMA) and athletic training program accreditation through the Committee on Allied Health Education and Accreditation (CAHEA) (Delforge & Behnke, 1999). Sophisticated medical technology also

mandated educational reform due to an increase in the extent of knowledge needed from today's health care professions. Athletic training education curricular revisions accommodated for modern advances and medical evidence in the profession to further educate future athletic trainers and expand its position within the allied health field (Peer & Rakich, 2000). Currently, the accredited agency responsible for athletic training education is the Commission on Accreditation of Athletic Training Education (CAATE). Accreditation ensures the practice of a curriculum education model (versus the internship-route model), curriculum standardization, and Board of Certification examination eligibility among all athletic training education programs (Peer & Rakich, 2000). The CAATE has also collaborated with the NATA to develop the *Standards for the Accreditation of Professional Athletic Training Programs* (the *Standards*) to regulate the preparation of entry-level athletic trainers at each accredited institution (Commission on Accreditation of Athletic Training Education [CAATE], 2012). Athletic training programs (ATPs), as well as the CAATE, utilize the *Standards* to develop, evaluate, analyze, and maintain their educational programs (CAATE, 2012).

Athletic training education reform also initiated modifications to previous roles and responsibilities of athletic trainers. Athletic training educators and clinicians were once individual and separate positions. It is now common for athletic training clinical staff to be involved within the didactic and curriculum aspects of the program and interact with students (Mangus, 1998). Due to their vast clinical experience, athletic trainers are chosen as primary preceptors for students. Athletic trainers are confronted with various responsibilities; shifting roles from clinician to patient educator to student educator to mentor often within the same day. Clinical athletic trainers must find balance between their primary responsibility of taking care of athletes and their secondary roles as educators of athletic training students (Mangus, 1998).

Athletic trainers who chose full-time faculty positions, such as the athletic training education program director, often forfeit their daily, hands-on interactions in the athletic training clinic with athletic training students and athletes. Their didactic responsibilities may include preparing and teaching courses, as well as advising or mentoring students (Walter, Van Lunen, Walker, Ismaeli, & Onate, 2009). One particular faculty position, the athletic training education program director, is met with an excess amount of new administrative responsibilities such as managing the daily operations of an athletic training program, organizing and implementing the *Standards* within the program, and coordinating, supervising, and evaluating the athletic training program, its students and staff (Walter et al., 2009; CAATE, 2012). A program director must also balance their time between students and institutional responsibilities, such as program administration and completing tenure requirements, which include teaching, scholarship, and service (Walter et al., 2009).

Athletic Training Leadership

Compared to other allied health care professions, athletic training leadership research is dramatically deficient, yet it is suggested that understanding leadership is vital for implementing one's professional role (Kutz, 2012a; Kutz, 2016). The 6th edition of the Board of Certification *Role Delineation Study* (2010) supports the need of leadership behaviors among athletic trainers in order to successfully demonstrate "organizational and professional practices and guidelines to ensure individual and organizational well-being" (p. 3). Throughout Kutz's study (2012a), only eight articles were found when researching specifically athletic training and leadership (p. 20). Leadership is an essential component for all areas of the athletic training profession whether practicing in a clinical setting or serving as an educator (Laurent & Bradney, 2007; Kutz, 2008; Kutz & Scialli, 2008). Athletic trainers find themselves in various workplace sites, from

traditional to clinical settings, and must interact with different departments, administrators, and other allied health care professionals. It is common in the athletic training profession for a seasoned clinical athletic trainer to earn an administrative position by becoming appointed to that position regardless of formal leadership training or managerial preparation (Passauer, 2004; Yellen, 2012; CAATE, 2012). Often, the athletic training education program director was once a part of a clinical setting before becoming a full-time faculty member. Understanding effective leadership can aide athletic trainers in such situations and help with new administrative roles, such as building credibility to a program or organization, creating positive working environments, decreasing stress among faculty and students, establishing positive working relationships, and even instilling necessary organizational change (Platt-Meyer, 2002b; Kutz, 2008; Kutz & Scialli, 2008). Leadership is vital in health care not only to benefit the clinician, but also to provide quality healthcare by improving clinical outcomes and patient satisfaction (Wong & Cummings, 2007; Kutz, 2012a). Based on this concept, it is obvious that leadership is imperative for both preparing athletic training students as young professionals and preparing the clinician for administrative responsibilities (Wong & Cummings, 2007; Kutz, 2012a).

Due to the educational reform in athletic training curriculum over the past decade, leadership elements have become important for the athletic training program director and the expansion of athletic training education (Delforge & Behnke, 1999; Kutz, 2008). The Board of Certification, Inc. (BOC) was established in the 1980s to provide a certification program for entry-level athletic trainers (Board of Certification, Inc. [BOC], 2016). The board regularly reviews the standards for athletic training practice and sets continuing education requirements for certified athletic trainers (BOC, 2016). The BOC *Role Delineation Study and Practice Analysis* identifies important knowledge and skills for athletic training professionals. The document

recognizes that athletic trainers must demonstrate leadership in order to compete in the healthcare market (BOC, 2010; Kutz, 2012a). Athletic trainers within administrative positions have demonstrated utilizing transformational leadership behaviors to motivate students, encourage academic achievement, and to positively influence staff members towards common goals (Laurent & Bradney, 2007; Leone, Judd & Colandreo, 2008; Herzog & Zimmerman, 2009; Meyer, 2012; Odai, 2012). Northouse (2010) defines *transformational leadership* as “a process that changes and transforms people...concerned with emotions, values, ethics, standards, and long-term goals” (p. 171). Along with administrative duties, athletic training education program directors have the opportunity to practice leadership behaviors when acting as positive role models for students, interacting and establishing relationships with clinical and educational colleagues, and implementing change within the organization (Laurent & Bradney, 2007; Judd & Perkins, 2004; Yellen, 2012; Odai, 2012). The goal of the program director is to develop their athletic training students into young, successful professionals. Preparing students for an athletic training career may be accomplished by utilizing specific characteristics of transformational leadership. Such characteristics include inspiring, challenging, enabling, and encouraging behaviors between the program director and student (Laurent & Bradney, 2007; Odai, 2012).

With regard to healthcare, Kutz (2008) defined *leadership* as “the ability to ethically influence others, regardless of title or role, toward the accomplishment of goals and objectives” (p. 15). Athletic trainers are naturally in positions of leadership when they are influencing patients or students towards a common goal (Laurent & Bradney, 2007; Puccio, Mance & Murdock, 2011). Athletic training leadership may include encouraging a patient during their rehabilitation or motivating athletic training students to prepare for the board of certification examination. Despite the plethora of leadership definitions, a common outcome of leadership is

the influence over others (Kutz, 2016). Athletic training educators are in direct contact with athletic training students daily and can greatly influence their decisions or behaviors. Athletic training program faculty and staff serve vital roles as positive models and mentors for students enrolled in undergraduate education programs (Peer & Schlabach, 2009). Athletic training educators, including the program director, must portray quality leadership behaviors to effectively develop and motivate young learners (Peer & Schlabach, 2009). Program directors must be able to utilize effective leadership to provide quality educational experiences and inspire young athletic training students to complete their degrees to pass the national athletic training Board of Certification examinations. All athletic training educators play a vital role in developing students into allied health care professionals. They teach the skills and knowledge needed to pass the board of certification exam, while also teaching professionalism, empathy, and dedication through their actions and behaviors, which are observed by students.

Leadership shapes the behaviors of others and can even ignite the intrinsic motivation in young learners (Loke, 2001; Puccio, Mance & Murdock, 2011). Leadership from the athletic training program director is essential for the overall success of the athletic training program. This leader is responsible for ensuring quality education, maintaining the well-being of staff and students, as well as upholding accreditation compliance. Previous research (Laurent & Bradney, 2007; Herzog & Zimmerman, 2009; Meyer, 2012; Yellen, 2012; Odai, 2012; Yates, 2013; Drake, 2014; Handlos, 2014; Gomez, 2015) has identified specific leadership behaviors that are common among athletic training clinicians and educators. Such behaviors include aspects of transformational leadership characteristics, such as modeling, inspiring, challenging, enabling, and encouraging others (Laurent & Bradney, 2007; Odai, 2012; Yates, 2013; Drake, 2014; Handlos, 2014; Gomez, 2015). Program director leadership behavioral analysis within athletic

training is often self-reported. Little research has compared both program director and athletic training students' perspectives regarding program director leadership behaviors in athletic training education. The root of leadership is influence, which is triggered by actions or behaviors that motivate others to act (Puccio, Mance & Murdock, 2011); therefore, leadership is a relationship between one individual and their constituents. In order to effectively investigate this relationship within athletic training education, both parties involved should be studied; the student and the program director. Student perceptions of their program director's leadership are an important variable in this study. Athletic training program performance, characterized by first attempt pass rates on the Board of Certification exam, was used as sufficient means of measuring overall program success within athletic training education. Once a candidate passes the Board of Certification examination, they become one-step closer to being able to practice as a Certified Athletic Trainer. Literature surrounding athletic training leadership describes two common components for success; influence and measurable results (Kutz, 2012). To date, athletic training research has yet to identify specific leadership behaviors that program directors should utilize in order to achieve program success.

As athletic training education continues to grow and reform, so does the need for highly qualified administrative leaders. Educators and administrators responsible for shaping young professionals must increase their leadership knowledge and behaviors to provide satisfactory student educational experiences (Laurent & Bradney, 2007; Herzog & Zimmerman, 2009; Odai, 2012; Kutz, 2012b; Drake, 2014). Educators must be aware of their leadership behaviors in order to inspire and influence athletic training students (Kutz, 2008; Platt-Meyer, 2002a; Kutz, 2012b; Odai, 2012). Demonstrating effective leadership skills has improved the efficiency of athletic training services; however, little research has been conducted on direct links between specific

program director leadership behaviors and athletic training student success within the athletic training education program (Laurent & Bradney, 2007; Yellen, 2012; Drake, 2014). Although differences between male and female program directors' leadership behaviors have been discovered, more research could enrich this area of allied health care (Eagly & Johannesen-Schmidt, 2001; Laurent & Bradney, 2007). Leadership continues to be an important aspect in the athletic training profession (Kutz, 2008; Yellen, 2012; Yates, 2013; Drake, 2014). It is essential that male and female program directors recognize differences amongst their leadership behaviors in order to demonstrate suitable leadership behaviors, provide for students' needs, and maintain a successful educational program.

Statement of the Problem

Program directors are expected to demonstrate notable leadership behaviors while implementing their educational programs, yet few have completed formal training to prepare them for their roles and responsibilities. Contemporary athletic training programs have adopted leadership courses as part of the undergraduate curriculum within the past decade; however, including such courses has never been an accreditation requirement. Therefore, not all athletic trainers who are now administrators were exposed to leadership training and development during their undergraduate career. Athletic training administrative positions were granted based on clinical experience and reputation as a commendable preceptor (Passauer, 2004; Yellen, 2012). In order to gain leadership skills, program directors learned behaviors through on the job experience or, if desired, participated in outside leadership training such as continuing education courses.

Leadership studies among athletic trainers in the collegiate setting are increasing. Previous research has investigated self-reported leadership behaviors of athletic trainers both in

the clinical and didactic realm and as administrators (Platt, 2000; Platt-Meyer, 2002b; Passauer, 2004; Leone, Judd & Colandreo, 2008; Laurent & Weidnert, 2001; Laurent & Bradney, 2007; Peer & Schlabach, 2009; Yellen, 2012; Kutz, 2012b; Meyer, 2012; Odai, 2012; Handlos, 2014; Drake, 2014). Often, program director leadership and behavioral analysis is self-reported and one sided which can result in unreliable and biased scores (MacKie, 2015). There is little research which offers multi-source or 360-degree feedback including both program director and athletic training students' (ATS) perceptions about leadership behaviors in athletic training education. Multi-source feedback instruments are unique in that they provide a broader analysis specifically for participant assessment and awareness purposes, rather than measuring change after a leadership development intervention (MacKie, 2015). It would benefit program directors to engage in multi-source leadership evaluations with students within their education programs. Analyzing student perceptions may illustrate leadership behaviors significant to athletic training student success. Program directors are responsible for the success of their program; measured by accreditation standards of a 70% or higher first attempt passing rate on the Board of Certification (BOC) examination. Research has yet to identify specific leadership behaviors that program directors should utilize in order to promote student proficiency or academic achievement in athletic training education.

Leadership characteristics between male and female program directors are another unfamiliar area in athletic training. Female program directors have reported utilizing modeling, challenging, and encouraging components more often than male program directors (Laurent & Bradney, 2007). Minimal research has been conducted on the differences between male and female athletic training leadership behaviors and practices. Tourangeau's and McGilton's (2003)

study suggested that women are inclined to build relationships within organizations while men strive to accomplish goals and specific tasks.

Purpose of the Study

The purpose of this study was to investigate the relationships between athletic training students' perceptions of their undergraduate program director's leadership behaviors (modeling, inspiring, challenging, enabling, and encouraging) and overall athletic training program success (measured by the Board of Certification examination performance specifically program first-attempt pass rates). The study attempted to recognize relationships and define specific leadership behaviors of program directors within their educational programs using a 360-feedback assessment.

Athletic training program director positions have become more demanding and sometimes challenging. Program directors are required to have experience mentoring and teaching students while juggling faculty responsibilities, tenure-track requirements, accreditation compliance, and maintain their own athletic training certification. Leadership is noted as an important role for the athletic training professional in order to increase productivity among staff, improve the overall work environment (including increase employee satisfaction), and to decrease burnout (Laurent & Bradney, 2007; Kutz, 2012a). Understanding one's leadership behaviors is an essential component for the program director to motivate young learners, mentor athletic training program staff, and ensure the overall success of the program. Previous research (Laurent & Bradney, 2007; Herzog & Zimmerman, 2009; Meyer, 2012; Yellen, 2012; Odai, 2012) has suggested leadership behaviors that are common among athletic training program directors, but these studies have used self-reported instruments and have not included multi-source feedback. This study utilized a 360-evaluation model where athletic training students

provided valuable insights regarding their program director's leadership behavior. The 360-approach results in more balanced assessments by recognizing bias and providing a complete evaluation (Skipper & Bell, 2006).

The literature continues to suggest there is a need for leadership within athletic training, but specific leadership behaviors have not been documented (Kutz, 2006). It is important for program directors to understand their leadership practices to determine if they are practicing proficient leadership behaviors. Effective leadership, despite one's position within education programs, can, "influence people over whom they have no formal authority" (McConnell, 2006, p. 146; Kutz, 2006).

Theoretical Framework

The question of how one leads effectively has been the prevalent topic of numerous leadership theories. Literature has affirmed that leadership in the didactic and clinical settings is imperative for increased athletic training student learning, success, productivity, improved educational environments, decreased burnout, and overall increased student satisfaction (Laurent & Bradney, 2007; Leone, Judd & Colandreo, 2008; Nellis, 1994; Platt-Meyer, 2002b; Kutz, 2008; Peer & Schlabach, 2009; Brown et al., 2001; Meyer, 2012). The athletic training education program director can be viewed as the keystone of the program and is expected to successfully lead the organization; however, leadership is complex. The literature does not present program directors with practical evidence for how to implement specific leadership styles and it fails to offer athletic training program directors a comprehensive review of their current leadership behaviors. Previous research studies have shown athletic training program directors demonstrate characteristics of transformational leadership behaviors (Laurent & Bradney, 2007; Leone, Judd & Colandreo, 2008; Kutz, 2008, Meyer, 2012; Yates, 2013); therefore, the primary theoretical

framework researched for this study includes transformational leadership theory. A secondary component related to this theory was also investigated which is known as the Five Practices of Exemplary Leadership Model (Kouzes & Posner, 2002). This model recognizes five specific leadership practices common among great leaders and offers suggestions for utilizing them within an organization: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart (Kouzes and Posner, 2002). Athletic training program directors leadership practices were investigated based on this model. Research has also claimed athletic trainers portray situational leadership styles in which specific leadership traits may be learned and may vary depending on the circumstances (Platt-Meyer, 2002a; Northouse, 2010). Although situational leadership theory and trait leadership theory are not directly investigated, they are discussed due to their impact and reference to athletic training education.

Transformational leadership theory was first proposed in 1978 by James MacGregor Burns (Yukl, 1999; Northouse, 2010). This leadership theory describes an on-going process of building trust and loyalty between leader and constituents. A connection between the leader and followers is established on emotions, values, ethics, standards, and goals to motivate others to accomplish shared outcomes relevant to the organization as a whole rather than personal self-interest (Burns, 1978; Yukl, 1999; Northouse, 2010; Laurent, 2007). A transformational leader strives to engage with followers by tending to their needs and help them reach their fullest potential (Burns, 1978; Northouse, 2010). The program director is in a position to motivate the entire athletic training program towards a shared vision and common goal by establishing relationships with faculty members and students. These relationships should emphasize a leader's dedication to the organization, focus on students' needs, and strive for students' success. This theory may explain how program directors motivate students by portraying specific

leadership behaviors and may also offer insights into specific attributes students perceive as beneficial for success as measured by first attempt passing rates in the board of certification examination.

A secondary theoretical framework supporting the transformational leadership model relevant to this study is Kouzes and Posner's (2002) model entitled the Five Practices of Exemplary Leadership. The researchers studied various successful organizations and determined specific leadership practices that were common among successful leaders (Kouzes & Posner, 2002; Frey, 2011). Knowing how to utilize specific leadership behaviors is critical for athletic training program directors due to their various roles as administrators and educators. This theory combines traits from transformational leadership to explain which specific leadership practices are most effective for program directors as their roles as educators to promote first time passing rates on the board of certification examination.

Significance of the Study

The significance of this study was the attempt to determine relationships between athletic training education program success and program director leadership behaviors based on the Five Practices of Exemplary Leadership: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart (Kouzes & Posner, 2002). These findings would assist program directors in determining which leadership behaviors are beneficial for athletic training student success. Program directors would also be able to reflect on their own individual leadership behavior to identify and improve any areas of weakness. Results from this study would assist program directors for their leadership position. The implications of this study are relevant not only to athletic training educators, but all athletic trainers in positions of

leadership. Lastly, athletic training organizations could consider these outcomes when developing leadership courses for athletic training education curriculum.

Research Design

A descriptive design was used for this study. Relationships explored were athletic training program director leadership behaviors, defined by Kouzes' and Posner's (2002) The Five Practices: model, inspire, challenge, encourage, and enable, as the independent variable, and the correlation among athletic training program performance on the BOC examination as the dependent variable. Leadership behaviors were measured by the Leadership Practices Inventory-360 (LPI-360) (Kouzes & Posner, 2013c). Analysis of transformational and trait-approach leadership theories determined if correlations existed between program director leadership behaviors and overall athletic training program performance as described by BOC exam pass rates. The BOC exam performance is a valid means of measuring performance within an athletic training program. National accreditation standards require athletic training programs to achieve at least a 70% first attempt pass rate over a 3 year aggregate to be considered for accreditation compliance.

Research Questions

1. Are there differences between program director self-reported leadership behaviors (model, inspire, challenge, enable, and encourage) and students' perceptions of program director leadership behaviors?
2. Are there relationships between students' perceived program director leadership behaviors (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination?

- a. Are there relationships between program directors' self-reported leadership behaviors (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination?
3. Do specific program director leadership behaviors (model, inspire, challenge, enable, and encourage) predict institutional first-attempt passing rates on the national athletic training BOC examination?
4. To what extent do male and female program directors portray different leadership behaviors (model, inspire, challenge, encourage, and enable) as perceived by undergraduate athletic training students?
 - a. To what extent do male and female program directors self-report portraying different leadership behaviors (model, inspire, challenge, encourage, and enable)?
5. To what extent do determinants support or hinder institutional BOC exam passing rates?
 - a. Determinants considered were: students' SAT scores, students' GPA, completion of a BOC exam preparation course, the time (month) the BOC exam was attempted, size of institution or NCAA affiliation, and prior leadership training completed by the Program Director.

Hypotheses

1. H₀: Program directors' leadership behaviors (model, inspire, challenge, encourage, and enable) will not improve overall program first-attempt passing rates on the Board of Certification exam.
2. H₀: Undergraduate athletic training students will not perceive their program directors' leadership behaviors (model, inspire, challenge, encourage, and enable) as factors that positively influence their first attempt passing rates on the Board of Certification exam.

3. H₀: Male and female program directors will not portray different leadership behaviors (model, inspire, challenge, encourage, and enable).

Assumptions and Limitations

The study relied on multiple assumptions:

1. Program director self-reports and athletic training student observer-reports were accurate and honest.
2. The Leadership Practiced Inventory-360 developed by Kouzes and Posner (2002) is a valid and reliable instrument used to measure leadership behaviors and is applicable to athletic trainers in educational or leadership positions.
3. An athletic training education program's first attempt pass rate on the Board of Certification exam is a valid means of measuring program success.
4. All athletic training program directors strive for a 70% or higher program first attempt pass rate on the Board of Certification exam.

The limitations within the study include:

1. The sample size is limited to five athletic training programs in the mid-Atlantic region and is relatively small.
2. All athletic training students did not respond to the survey.
3. Athletic training students experienced additional factors that contribute to their BOC exam first attempt passing rate, such as participating in board exam preparation workshops or senior level exam preparation courses, taking mock BOC exams, or internship experience.
4. The athletic training BOC exam is a standardize exam.

5. Athletic training students who had a negative relationship with their program director hold prior biased opinions against them and purposely skewed leadership behavior scores.

Definition of Terms

1. American Medical Association (AMA): An organization dedicated to ensuring quality and lasting physician health practices by emphasizing improved health care, accelerating change in medical education, and enhancing physician practice and satisfaction by improving health care delivery and payment models (American Medical Association, 2016).
2. Athletic Training Program (ATP): An educational and professional preparation program that has met all the accreditation requirements set forth by the Commission on Accreditation of Athletic Training Education (CAATE). The ATP is a four-year undergraduate academic program based on knowledge and skills in eight content areas: evidence-based practice, prevention and health promotion, clinical examination and diagnosis, acute care of injury and illness, therapeutic interventions, psychosocial strategies and referral, healthcare administration and professional development and responsibility (Commission on Accreditation of Athletic Training Education [CAATE], 2012).
3. Athletic Training Program Director (PD): Defined by the Commission on Accreditation of Athletic Training Education *Standards* as “a full-time employee of the sponsoring institution...with full faculty status, rights, responsibilities and privileges...with responsibilities including ongoing compliance with the Standards, planning,

development, implementation, delivery, documentation and assessment of all components of the curriculum, clinical education, and programmatic budget” (CAATE, 2012, p.4).

4. Athletic Training Student (ATS): A common phrase in athletic training education to refer to undergraduate students who have been accepted into a four year CAATE accredited Athletic Training Program.
5. Board of Certification (BOC): An agency responsible for the certification of entry-level athletic trainers, as well as establishing and regularly reviewing the standards of practice of athletic training and continuing education requirements for BOC certified athletic trainers. The BOC is the only organization housing the accreditation certification program for athletic trainers in the United States. Students are eligible to attempt the BOC exam through completion of an athletic training education program accredited by the Commission on Accreditation of Athletic Training Education (CAATE) (Board of Certification [BOC], 2016). It is required that all undergraduate athletic training programs possess an overall program first attempt BOC passing rate of 70% or higher (CAATE, 2012).
6. Certified Athletic Trainer (ATC): Health care professionals, recognized by the American Medical Association as a health care profession, who collaborate with physicians to provide services specialized in preventing, recognizing, managing and rehabilitating injuries that result from physical activity (National Athletic Trainers’ Association [NATA], 2013; BOC, 2016).
7. Commission on Accreditation of Athletic Training Education (CAATE): An accreditation agency specifically designed for athletic training education. The purpose of this accreditation body is to develop, maintain, and promote quality standards for all athletic

training education programs including Professional, Post-Professional and Residency Programs in athletic training (CAATE, 2012).

8. Experience: A continuous variable that is measured in number of years.
9. National Athletic Trainers' Association (NATA): A professional membership organization, founded in 1950, specifically for athletic trainers and others who support the profession. Members of this association receive an extensive assortment of membership benefits (NATA, 2013).
10. Route to certification: A common phrase used in athletic training studies used to describe the means in which the athletic training certification was achieved (internship, NATA accredited program, or other).
11. The Standards for the Academic Accreditation of Athletic Training Programs (the *Standards*): Developed by CAATE and the NATA, the *Standards* are a set of guiding principles that provide minimum academic requirements for all Athletic Training Programs and are used to develop, evaluate, analyze, and maintain Athletic Training Programs (CAATE, 2012).

Expected Findings

This investigation hopes to gain insight into leadership theories, behaviors, and practices that are perceived important by program directors and their athletic training students. Since the students and programs involved in this study are in the higher education setting, the researcher expects the students to be exposed to some minimal level of professionalism and leadership. It is also expected that male and female program directors will portray their own versions of leadership tactics. The researcher anticipates the results from this study will add to the academic conversation regarding athletic training program director leadership behaviors.

Organization of the Remainder of the Study

In summary, athletic training education continues to grow and reform and there is a need for highly qualified administrative leaders. Leadership continues to be an important aspect in the athletic training profession (Kutz, 2008; Kutz, 2012a). It is essential that program directors recognize important leadership behaviors in order to provide for students' needs and maintain a successful athletic training educational program. This study will explore a systematic empirical design to examine athletic training student perceptions of their program directors' leadership behaviors and any significant relationships. Chapter 2 presents a review of relevant literature surrounding athletic training education, its history, leadership in athletic training, and common challenges for program directors in undergraduate athletic training education programs. Chapter 3 presents the research questions, the various methods for data collection, and describes the instrument used in this study. Chapter 4 presents a detailed description of the data analysis and significant findings for this study. Finally, Chapter 5 is a discussion of the significant outcomes of the study as well as suggestions for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

Athletic training educators are immersed in various organizations that may critically influence job performance and professional obligations. Leading an undergraduate athletic training education program may offer many challenging situations, especially for those transitioning out of a clinical practice setting. Topics considered for this literature review address problematic, yet manageable, concepts and issues that occur within an educational program. The purpose of the review of the literature is to explore various leadership models and their relation to the program director's role in undergraduate athletic training education programs. This chapter will provide a historical background describing athletic training education milestones and current practices. Leadership models relevant to athletic training program directors will also be discussed.

Common leadership theories studied within athletic training education include transformational and situational leadership. Literature surrounding trait-theory leadership, as well as leader gender differences, will also be identified. Although athletic training program directors serve a vital role within the higher education setting, current research does not identify specific characteristics needed to become a successful athletic training program director. Accreditation requirements for the program director position are general and do not require leadership training. As the athletic training profession continues to grow, greater leadership among athletic training education is needed.

Athletic Training Education Background

Athletic training education has impressively evolved into organized, accredited undergraduate and graduate programs. Over 50 years of educational reform has occurred to

effectively prepare individuals for the allied health care profession (Delforge & Behnke, 1999). Formerly, there were two methods for obtaining national athletic training certification: a curriculum-based educational route or an internship-based clinical route. Both methods were viewed as sufficient pre-requisite qualifications for challenging the national Board of Certification (BOC) exam to become a certified athletic trainer. The curriculum based program consisted of a variety of rigorous course work with a minimum requirement of 800 clinical experience hours. The clinical internship program required a minimum of 1500 clinical experience hours with limited coursework (Delforge & Behnke, 1999). When compared to other allied health care educational programs, such as nursing, both methods of athletic training education lacked standardization, credibility, and quality (Peer & Rakich, 2000). Athletic training education programs also differed across the country depending on their institution. Accredited athletic training education programs simply did not exist so programs lacked basic standards and structure, such as missions and goals, assessments, and outcomes. The National Athletic Trainers' Association (NATA), which was founded in 1950, recognized that both conflicting models lacked regulation and change within athletic training education curriculum was inevitable (Delforge & Behnke, 1999; Peer & Rakich, 2000).

The 1960s and 1970s were full of curriculum development reform for athletic training education. National Athletic Trainers' Association's Professional Education Committee and Certification Committees were established along with NATA's first approved athletic training curriculum model (Delforge & Behnke, 1999). This model included minimal clinical education standards for students under the direct supervision of a certified athletic trainer to guide and monitor clinical skills development (Delforge & Behnke, 1999). The NATA approved program also prepared entry-level athletic training students to work in the secondary school setting, with a

background in athletic training and health and physical education, and prepared them for advanced graduate schools, such as physical therapy (Delforge & Begnke, 1999; White, 2005). It was not until the late 1970s that NATA published the *Guidelines for Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs* (known as the *Guidelines*) which upheld specific standards for all undergraduate athletic training students (Delforge & Behnke, 1999). These *Guidelines*, which were again revised and then published in 1983, also enabled undergraduate athletic training education programs to convert from educational concentrations to NATA-approved major field of study (Delforge & Behnke, 1999). At this point in time, there became four methods for obtaining an athletic training certification: graduating from one of the NATA approved athletic training education programs, graduating from a physical therapy program, completing an intense internship program, or actively working as an athletic trainer for a minimum of five years (Delforge & Begnke, 1999; White, 2005). The number of NATA approved athletic training education programs also grew immensely across the country from 1969 to 1982 (Delforge & Begnke, 1999; White, 2005).

During the 1980s, the number of NATA-approved athletic training programs continued to expand their course offerings and the paradigm shift was now accepting athletic training as a “reasonable and realistic educational goal” (Delforge & Begnke, 1999, p. 57). The NATA Board of Directors declared all NATA-approved athletic training education programs must offer an undergraduate athletic training major and must be in this transition period by July 1, 1986 (Delforge & Begnke, 1999). Once the strategic plan was developed and approved, the timeline for completion and implementation of an undergraduate athletic training major was extended to July 1, 1990 (Delforge & Begnke, 1999). The *Guidelines*, which upheld specific standards for all undergraduate athletic training students, was also revised in order to promote a more

competency-based athletic training education program (Delforge & Begnke, 1999). Two major components were added to the *Guidelines*. The first component was that athletic training programs were required to include specific subject matter within their courses, such as prevention and evaluation of athletic injuries, first aid and emergency care, therapeutic modalities and exercise, biomechanics, and exercise physiology (Delforge & Begnke, 1999). The second component consisted of specific *Competencies in Athletic Training* (referred to as the *Competencies*), which was derived from detailed performance domains, and required all athletic training students to complete during their undergraduate career (Delforge & Begnke, 1999).

The 1990s were full of more exciting milestones for athletic training education. Universities across the country established formal majors and offered bachelor's degrees in athletic training (Delforge & Behnke, 1999). Simultaneously at this time, the American Medical Association (AMA) officially recognized athletic training as an allied health care profession (Delforge & Behnke, 1999). Certified athletic trainers were now able to expand their position within the allied health care field, increase their scope of practice, and provide modern treatment techniques to their patients (Peer & Rakich, 2000).

Athletic training education was once again forced to revise its model to accommodate for modern medical advances, to further educate future athletic trainers, and to expand its position within the allied health field (Peer & Rakich, 2000). National Athletic Trainers' Association also recognized the benefits and need for standardized education programs and began to seek accreditation for entry-level athletic training education programs through the Committee on Allied Health Education and Accreditation (CAHEA) (Delforge & Behnke, 1999). National accreditation was attractive for entry-level programs due to the belief in quality standardized

education program requirements and intense program review by a highly regarded accreditation agency (Delforge & Begnke, 1999). Representatives from the AMA then joined representatives from NATA to establish the Joint Review Committee on Education Programs in Athletic Training (JRC-AT) and develop standards and guidelines for CAHEA accreditation (Delforge & Begnke, 1999). In 1994, CAHEA granted accreditation to the first two entry-level athletic training education programs (Delforge & Behnke, 1999). Shortly thereafter, CAHEA was disbanded and a new accrediting body, the Commission on Accreditation of Allied Health Education Programs (CAAHEP), was established (Delforge & Behnke, 1999). By 1998, CAAHEP had granted accreditation to 82 entry-level athletic training education programs nation-wide (Delforge & Behnke, 1999). Accreditation ensures the practice of a curriculum-based education model, curriculum standardization, and BOC examination eligibility among all athletic training education programs (Peer & Rakich, 2000). Towards the end of the decade, NATA worked with the Board of Certification and developed a requirement that those seeking national athletic training certification must first complete and earn a bachelorette degree in athletic training from a CAAHEP-accredited undergraduate program and the internship route to athletic training certification would be discontinued (Delforge & Behnke, 1999). This standard officially came into effect in 2004 (Delforge & Behnke, 1999).

Currently, athletic training educational reform continues to expand. The accrediting body that is known today is the Commission on Accreditation of Athletic Training Education (CAATE) which organized as an accreditation agency specifically for athletic training education (Commission on Accreditation of Athletic Training Education, 2012). The purpose of this accreditation body is to develop, maintain, and promote quality standards for all athletic training education programs (CAATE, 2012). The CAATE collaborated with the National Athletic

Trainers' Association to develop the *Standards for Entry-Level Athletic Training Education Programs* (referred to as the *Standards* from this point forward) that all accredited athletic training education programs must adhere to (CAATE, 2012). Each institution has a responsibility to maintain compliance with the *Standards* in order to continue to be recognized as a CAATE-accredited organization (CAATE, 2012). The *Standards* unify athletic training education programs across the country and hold all programs, including program instructors, accountable for their students' education. In 2004, athletic training internship-based educational routes ceased to exist and were no longer considered an acceptable pre-requisite for the national board of certification exam. Under the direction of CAATE, all athletic training students must graduate from a CAATE-accredited athletic training education program in order to challenge the national board of certification exam and become a certified athletic trainer.

What does the future look like for athletic training education? The CAATE is once again embarking on an innovative athletic training education transformation. In September 2015, the CAATE announced, within the *Standards*, that all undergraduate athletic training education programs must transition into graduate level athletic training Master's program or be dissolved and the only route to athletic training certification is through completion of an athletic training Master's program (CAATE, 2012). At the time this study was written, only three criteria were established; all athletic training courses must be taught at the Master's level, the Master's coursework must be completed over the sequence of two years, and athletic training programs have until the fall of 2022 to complete this transition (CAATE, 2012). To date, no additional or revised standards have been established. Current undergraduate athletic training programs across the country must collaborate with their university officials to decide the fate of their educational program.

Athletic Training Education Program Delivery

All undergraduate athletic training education programs must be accredited through the Commission on Accreditation for Athletic Training Education (CAATE, 2012). The accrediting body mandates specific minimal educational standards to ensure quality athletic training education programs across the country (CAATE, 2012). These educational requirements are known as the *Standards for the Accreditation of Professional Athletic Training Programs* (simply called the *Standards*) and are utilized by programs to educate and prepare entry-level athletic trainers (CAATE, 2012). Each institution is responsible for maintaining compliance with the *Standards* in order to renew their program's accreditation status. The *Standards* are also used to self-evaluate, modify, and maintain current athletic training education programs (CAATE, 2012).

According to the *Standards*, undergraduate athletic training programs must include various educational modules within their curriculum: formal didactic courses, laboratory sessions, and clinical education experiences (CAATE, 2012). Didactic learning is formal classroom instruction pertaining to current athletic training knowledge, theories, and educational competencies. Each course must have “written current course syllabi... with clearly stated objectives” (CAATE, 2012, p. 7). Course instructors and full-time athletic training faculty members may be certified athletic trainers or may be from other areas of allied health care, such as sport psychology, strength and conditioning, physical therapy, or nutrition. Laboratory courses are usually designed for hands-on learning with the opportunity for students to practice various athletic training clinical skills, such as taping and bracing, rehabilitation, therapeutic modalities, emergency medical techniques, and orthopedic assessment. Clinical education experiences allows students to apply their classroom knowledge to real-world, practical

situations. Students have the opportunity to master clinical proficiencies in preparation of becoming a certified athletic trainer. The clinical education can take place in various settings, such as a college or high school, physical therapy or sports medicine clinic, hospital, or athletic venue (White, 2005).

Clinical education is a huge curricular component of the CAATE-accredited undergraduate athletic training education program. During clinical education experiences, athletic training students are able to observe and practice various clinical skills that will help them become proficient athletic trainers. The clinical education experience “must follow a logical progression that allows for increasing amounts of clinically supervised responsibility leading to autonomous practice upon graduation” (CAATE, 2012, p. 7). As students progress through the athletic training education program, they are given more responsibilities and opportunities to master clinical skills. Athletic training students are presented with a variety of patients through multiple situations including individual and team sports, sports requiring protective equipment (shoulder pads and helmets) such as football or men’s lacrosse, patients of different gender, non-sport patient populations, and other non-orthopedic conditions such as general health care, internal medicine, or urgent care (CAATE, 2012). The athletic training students’ preceptor must provide direct supervision and feedback throughout the clinical education experience (CAATE, 2012). Since the complete elimination of the internship route in 2004, athletic training students are no longer required to attain 800-1500 clinical hours (White, 2005). Instead, athletic training programs must determine a minimum and maximum number of required clinical hours, allow students to have at least one day off within a seven day period, and athletic training students are not permitted to receive monetary reimbursement (CAATE, 2012).

It is common for the athletic training clinical staff to be involved within the didactic and curriculum aspect of the athletic training education program and interact with its students (Mangus, 1998). Athletic training clinical staff may be employed by the institution through the university's Athletics Department. Their primary responsibilities include injury prevention, clinical treatment, injury rehabilitation, and various administrative tasks. Due to their vast clinical experience, athletic trainers are chosen as primary clinical instructors, or preceptors, for students. Preceptors are responsible for the teaching and mentoring of aspiring athletic training students (CAATE, 2012). Often, preceptors work with specific collegiate teams and will have students assigned to them during the season. Clinical athletic trainers who chose to work with students must find balance between their primary responsibility of taking care of athletes and their secondary roles as educators (Mangus, 1998).

Athletic Training Education Program Personnel

The roles and responsibilities of the athletic training program staff members were also reformed along with the athletic training curriculum. New mandates from the *Standards* create increased duties and responsibilities for athletic training program staff (CAATE, 2012). Members, including Program Directors, Clinical Education Coordinators, and Clinical Preceptors not only help maintain the integrity of the athletic training program experience, but also ensure student and patient safety.

By CAATE *Standards* (2012), the program director is primarily responsible for the organization, administration, and implementation of the athletic training program, as well as maintaining compliance with the *Standards*. Additional members of the athletic training program report to the program director if there are academic questions or conflicts. The program director supervises and works with all instructors within the athletic training program to ensure

other positions are upholding their job responsibilities. The program director must be a certified (and, if applicable, state licensed) athletic trainer and a full-time faculty member with full faculty rights and responsibilities (CAATE, 2012). The program director must also be granted release time in order to complete administrative tasks within the program (CAATE, 2012).

The clinical education coordinator must also be a full-time faculty member with all faculty rights and responsibilities (CAATE, 2012). The clinical education coordinator must receive release time to meet “the institutional responsibilities for Clinical Education” (CAATE, 2012, p. 5). The clinical education coordinator is responsible for student clinical education progression throughout the program, clinical education site evaluation, athletic training student evaluations, preceptor training for all athletic training preceptors who mentor students, and preceptor evaluation (CAATE, 2012). The clinical education coordinator works with the program director to ensure quality education and the maintenance of program accreditation.

Athletic training education preceptors are responsible for student supervision during the clinical experience. They must provide instruction, feedback, and assessment of current athletic training student knowledge, skills, and clinical abilities (CAATE, 2012). The preceptor must also be a certified and state credentialed athletic trainer who is capable of providing instruction and assessment of the athletic training student (CAATE, 2012). The clinical education coordinator works attentively with the preceptors to provide mentoring education and ensure positive clinical education experiences. The athletic training student may be assigned to a preceptor for an entire semester and often builds professional relationships that last beyond the students’ academic career.

The Athletic Training Education Program Director

Before athletic training curriculum reforms, program directors held dual positions within the institution's academic department, as well as the athletics department. Program directors held both titles of athletic training educator and athletic training clinician (Perkins & Judd, 2001). Their primary responsibilities were divided between rehabilitating and caring for student-athletes within the athletic department and also providing quality didactic instruction for the athletic training education program (Perkins & Judd, 2001). Academic responsibilities alone were immense. Duties included faculty obligations, recruiting athletic training students, supervising students and program staff, coordinating and evaluating all aspects of the education program, and serving as the liaison between the education program curriculum and CAATE (Perkins & Judd, 2001; Walter, Van Lunen, Walker, Ismaeli & Onate, 2009). Program directors found it extremely difficult to complete tenure and promotion requirements while providing quality health care as a clinical athletic trainer (Judd & Perkins, 2004). Program directors that willingly transitioned into full-time faculty positions did so without any formal training. Athletic training professionals who completed graduate course work were trained in specific health-related content areas, but not prepared for administrative roles (Leone, Judd, & Colandreo, 2008). Each athletic training education program at various universities held different expectations of the program director, so specific responsibilities were poorly defined (Leone, Judd, & Colandreo, 2008). The new administrative position was faced with other challenges regarding teaching, research, and service and program directors found themselves "learning on the job" (Judd & Perkins, 2004, p. 186).

Increased accreditation requirements forced program directors to make critical career choices between serving in a traditional role as a clinician or the innovative roles as an educator

(Perkins & Judd, 2001). Athletic training programs are continually growing across the country and there is a demand for “a highly qualified faculty member” to lead the program and carry out the multiple responsibilities that accompany the job position (Perkins & Judd, 2001, p. 396). While managing time between students, patients, and program administration, program directors often experience a level of burnout (Walter et al., 2009). Walter et al. (2009) described burnout as “a negative response to stress and is a syndrome displaying three major characteristics: emotional exhaustion, depersonalization, and a lack of personal accomplishment” (p. 190). Often program directors hold a faculty position at their institution of employment and are required to fulfill faculty responsibilities, such as service and scholarly research. These responsibilities combined with the program’s administrative tasks, create added stress for the program directors, and stress may lead to frustration and burnout (Walter et al., 2009). Program directors should assess their components of burnout and devise and implement a plan of intervention in attempts to prevent burnout (Walter et al., 2009). With the influx of responsibilities and stress, how are program directors to balance administrative roles with leading an undergraduate academic program?

Growth of athletic training education reform and accreditation mandates among colleges and universities have caused many athletic trainers to alter their roles within the profession from clinical staff to full-time faculty educators or administrators. Athletic training education programs provided additional courses to prepare future athletic trainers for administrative responsibilities. Specific courses include administrative organization and management, such as record keeping (documenting referrals and insurance forms), communication skills (within a diverse population including physicians), managing computer software, developing facility designs and administrative plans, and developing a resume (CAATE, 2012). While these courses

cover one aspect of a program director's duties, they lack other aspects of the job requirements; leadership skills or leadership training. Faculty and staff who are hired by allied health care educational programs, such as athletic training, to teach within their organizations are expected to be connoisseurs within their field, but are often deficient in effective leadership skills (Firestone, 2010). This method of hiring experts to teach within a professional field is often how chairpersons or program directors come to their position of leadership within the department despite minimal leadership training or former administrative experience (Firestone, 2010). Learning how to lead effectively can assist athletic training program directors in their daily program operations by decreasing stress and creating a more satisfying work environment (Laurent & Bradney, 2007; Kutz, 2012a).

An additional job responsibility of the program director is the recruitment and retention of athletic training students. Attracting and maintaining quality students within the organization will aid in athletic training program success (Dodge, Mitchell & Mensch, 2009). Dodge, Mitchell and Mensch (2009) demonstrated in their study of student retention that students will often leave the athletic training education program due to a lack of motivation. Athletic training program directors and educators must exhibit strong efforts to motivate, interest, and engage athletic training program students in efforts to complete their degree and work towards becoming skilled professionals (Dodge, Mitchell & Mensch, 2009). Athletic training can be a very demanding profession. Once graduated, students must be able to maintain intrinsic motivation to search for jobs and maintain job satisfaction once hired. In Terranova's study (2008), data revealed a decline in National Athletic Trainers' Association (NATA) membership and those practicing athletic training. The study presented a negative correlation between various aspects of job satisfaction and a desire to leave the athletic training profession (Terranova, 2008).

Program directors can be a useful resource for preventing burnout and mentoring students to seek internal motivation that will lead to increased job satisfaction.

Though the extensive program director position has continued to evolve, the training and preparation for a program director position has remained obsolete. Athletic trainers often further their knowledge and skill sets by specializing in a specific content area through graduate studies, such as kinesiology, biomechanics, exercise physiology, or pedagogy (Leone, Judd & Colandreo, 2008). These specific content areas may not necessarily prepare certified athletic trainers for administrative duties they must fulfill when they become a program director, unless additional preparation is sought on their own (Leone, Judd & Colandreo, 2008). Leadership development has become a popular topic among athletic training educators and researchers. Leadership knowledge, traits, skills, and abilities are important aspects in various health care professions including nursing, physical therapy, health care administration, general health professionals, and athletic training (Kutz & Scialli, 2008; Kutz, 2010). Leadership is also important within education in order to increase student motivation, enhance student learning, increase student productivity, improve employment setting environments, decrease burnout, and overall increase employee and student satisfaction (Laurent, 2007; Leone, Judd & Colandreo, 2008; Nellis, 1994; Platt-Meyer, 2002a; Kutz & Scialli, 2008; Peer & Schlabach, 2009; Brown et al., 2001; Meyer, 2012). Athletic training program directors must recognize their leadership behaviors to create positive outcomes and a successful program.

Leadership Theories

There is a plethora of leadership definitions, and theories attempting to define people, processes, and traits; however, leadership means different things to different people (Northouse, 2010). Burns (1978) described *leadership* as, “one of the most observed and least understood

phenomenon on earth” (p. 2). DuBrin (2004) defines *leadership* as the interaction between the leader, the follower, the group members, and the situation. Ray and Konin (2011) believe *leadership* is a process that involves influencing others’ behavior and attitudes to accomplish wanted outcomes. With regard to healthcare, Kutz (2008) defines *leadership* as “the ability to ethically influence others, regardless of title or role, toward the accomplishment of goals and objectives” (p. 15). Other authors consider leadership a process consisting of multiple dimensions in which “an individual influences a group of individuals to achieve a common goal” (Northouse, 2010, p. 3). Nevertheless, leadership is a unique relationship within most organizations consisting of common themes, including group influence and common goals.

When particular leadership behaviors are used in specific situations, positive relationships between individuals and organizational outcomes are created (Firestone, 2010). Effective leadership has been described as “essential for creating and sustaining effective schools” (Milton, 2011, p. ii). It is the institution’s responsibility to prepare its students with the vast knowledge, skills, and leadership necessary to become a proficient athletic trainer in today’s rapidly changing modern world. Leaders within today’s organizations must possess the abilities to lead on personal and professional levels and “thrive on the challenge of change; foster environments of innovation; and encourage trust and learning” (Brown, 2001, p. 312; Kutz, 2006, p. 31). Despite known effective leadership traits and behaviors, some organizations and schools are still not producing positive outcomes (Milton, 2011). A study investigating school culture and perceptions of effective leadership revealed discrepancies between different perceptions of effective leadership (Milton, 2011). Diverse groups within an organization may have different perceptions about what they consider an effective leader (Milton, 2011). Those in

positions of leadership must understand perceptions of others- peers or students- in order to lead their organization effectively.

The Board of Certification (2010) recommends athletic trainers possess leadership knowledge and skills in order to be successful health care practitioners. Employers also identify leadership as an important characteristic for athletic trainers, yet there is a shortage of leadership studies and competencies within the athletic training program curriculum (Kutz, 2006). A particular study surveyed the importance of leadership specific courses within various athletic training education programs (Kutz, 2006; Kutz, 2010). Results indicated that leadership competencies increased with importance as the level of the athletic training program progressed from entry level, to graduate, and then to post-graduate (Kutz, 2006; Kutz, 2010). Athletic training educators should be responsible for formal leadership skills training within their athletic training education program (Kutz, 2010). Additionally, “the Board of Directors of the Association of Schools of Allied Health Professions determined that there should be a national leadership program to help prepare emerging leaders in allied health education and practice” (Wilson, 2004, p. 144). This national effort supports leadership knowledge, competencies, and developments are important factors in undergraduate athletic training education.

Transformational Leadership Theory

Transformational leadership was first proposed in 1978 by James MacGregor Burns in his work, *Leadership* (Yukl, 1999; Yukl, 2006; Meyer, 2012). Burns’ (1978) work contrasted transformational leadership theory from transactional leadership theory. Transformational leadership theory places an emphasis on emotions and values where the leader influences and motivates the follower through trust and loyalty to accomplish outcomes that are shared and necessary for the organization as a whole rather than personal self-interest (Burns, 1978; Yukl,

1999; Yukl, 2006; Northouse, 2010; Laurent & Bradney, 2007). Transactional leadership theory motivates “followers by appealing to their self-interest and exchanging benefits... by providing pay and other benefits in return for work effort” (Yukl, 2006, p. 249). Influence by appealing to a person’s values and emotions are a vital trait for transformational leaders. Instead of motivating followers through rewards and punishments, transformational leaders strive to engage followers by tending to their needs and help them reach their fullest potential by accomplishing tasks above and beyond usual expectations (Northouse, 2010). Transformational leadership does not utilize power from one dictator; the followers’ necessities are the leader’s priority.

Transformational leadership focuses on relationships and connections between the leader and followers to influence one another to produce productive change within the organization. A transformational leader may be described as a charismatic leader. The term *charisma* was originally used to describe an individual who possessed a “special gift” that allowed them to accomplish extraordinary tasks among followers (Northouse, 2010, p. 173). Charisma is often used to describe transformational leaders, yet it is its own theory of leadership in itself (Northouse, 2010). In 1976, R.J. House published his works of charismatic leadership indicating specific and unique characteristics followers perceive as exceptional and give fully their trust and loyalty to their leader (Northouse, 2010; Yukl, 2006). The theory suggests charismatic traits include dominant personality, a desire to influence others, self-confidence, and knowing one’s moral values (Northouse, 2010). Charismatic leaders are described as strong and positive role models, understanding of constituents, possessing moral goals and set high expectations for their group members (Northouse, 2010). Transformational leaders are said to be charismatic when they utilize the behaviors described above to increase self-confidence and self-efficiency within followers, which allows for increased goal achievement, resulting in heightened bonds between

follower purpose and organizational identity (Northouse, 2010; Yukl, 2006). Although transformational leadership is preferred by followers, it may not always be the most efficient leadership style (Kutz, 2012).

During the 1980s, transformational leadership was revised by Bass (1985) describing transformational and transactional leadership as a continuum; providing positive outcomes on one end and less positive outcomes on the opposite end (Northouse, 2010). Bass (1985) also indicated an additional leadership theory on the negative end of the continuum opposite of transformational leadership- Laissez-Faire Leadership, where the leader fails to provide any effective leadership behaviors (Northouse, 2010; Yukl, 2006). This leadership theory is known as Bass' Full Range Leadership Model (Bass, 1985; Yukl, 2006). This model has been utilized among researchers to measure athletic training program directors' self-reported leadership styles, behaviors, and effectiveness (Odai, 2012). According to Odai's (2012) study, athletic training education program directors reported utilizing transformation leadership more often than passive-avoidant leadership. This current research study however, focused on constituent perspectives; therefore, did not use the Full Range Leadership Model as a leadership measuring instrument.

The contrast to transformational leadership is transactional leadership. Burns (1978) describes transactional leadership as the process of interactions that occur between a leader and the constituents (Northouse, 2010). A leader will utilize a reward, promise, or prize to motivate followers to accomplish the assigned task. This exchange of rewards is a common leadership technique utilized among various organizations. This leadership style can be very influential due to the subordinates complying with the leader's request based on their best interest. Transactional leaders operate differently and under different circumstances from transformational leaders

(Kutz, 2012). Transactional leadership is often defined based on the leader's own interest instead of the interest of the group; similar to the definition of a manager (Burns, 1978; Kutz, 2012).

Kouzes' and Posner's Leadership Theory

From 1983 to 2002 researchers James Kouzes and Barry Posner developed and revised their own transformational leadership model (Northouse, 2010; Kouzes & Posner, 2002). This model describes behaviors needed to become an exemplary leader and accomplish astonishing outcomes within an organization. A unique characteristic of this leadership framework is that it stipulates these behaviors and practices are available to anyone at any time and are not exclusively for positions of authority (Kouzes & Posner, 2007). A lack of authority or management title within an organization does not negate leadership abilities.

The researchers describe their leadership framework as the “Five Practices of Exemplary Leadership: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart” (Kouzes & Posner, 2007, p. 14). Complementing the five leadership practices are “ten commitments of leadership” (Kouzes & Posner, 2007, p. 25) that serve as a step-by-step guide to teach leaders how to lead. Each practice is paired with two commitments that leaders should practice to foster healthy relationships within their organizations. The following describes leadership practices and behaviors set forth by the Five Practices (Kouzes & Posner, 2007; Northouse, 2010).

Model the Way. This leadership practice includes setting a lead-by-example behavior within the organization including asserting values shared with others and upholding promises or commitments to constituents. Specific leadership behaviors associated with Model include

leaders who “clarify values by finding your voice and affirming shared values” and “set the example by aligning actions with shared values” (Kouzes & Posner, 2012, p.29).

Inspire a Shared Vision. This leadership practice includes communicating the leader’s vision as well as listening to members’ thoughts or ideas. Leaders should help put their members’ visions into realities and reassure them it is possible and positive for the organization. Specific leadership behaviors associated with inspire include leaders who “envision the future by imagining exciting and ennobling possibilities” and “enlist others in a common vision by appealing to shared aspirations” (Kouzes & Posner, 2012, p. 29).

Challenge the Process. Leaders must be able to take risks and be open-minded to innovations. Leaders are not hasty with their decisions and willingly learn from their mistakes. Specific leadership behaviors associated with challenge include leaders who “search for opportunities by seizing the initiative and looking outward for innovative ways to improve” and “experiment and take risks by constantly generating small wins and learning from experience” (Kouzes & Posner, 2012, p. 29).

Enable Others to Act. This leadership practice involves the leader creating an environment where members want to work, try new things, and contribute to their organization. The leader must foster team work and collaboration among all members while ensuring respect. Specific leadership behaviors associated with enable include leaders who “foster collaboration by building trust and facilitating relationships” and “strengthen others by increasing self-determination and developing competence” (Kouzes & Posner, 2012, p. 29).

Encourage the Heart. The leader must recognize constituents’ needs to be recognized and praised for hard work. The leader can increase constituent essence by acknowledging and praising accomplishments. Specific leadership behaviors associated with encourage include

leaders who “recognize contributions showing appreciation for individual excellence” and celebrate the values and victories by creating a spirit of community” (Kouzes & Posner, 2012, p. 29).

When the five practices are demonstrated together by the leader, these fundamental behaviors become the building blocks of a positive leader-constituent relationship. Managers who utilize as many leadership practices at once will be more effective and create organizations with satisfactory outcomes; employees will have job satisfaction, they will be productive, and they will have organizational commitment (McNeese-Smith, 1995; Loke, 2001; Kouzes & Posner, 2002). Kousez and Posner (2007) emphasize that leadership is a carefully crafted relationship between those who possess the will to lead and those who chose to follow. This relationship must be based on trust, loyalty, and respect to overcome obstacles and reach extraordinary outcomes (Kousez & Posner, 2007).

The researchers (Kouzes & Posner) also developed a method of leadership practice measurement tool completed by the leader, as well as by the constituents (Posner & Kouzes, 1988). The Leadership Practices Inventory-360 (LPI-360) is a 360-degree feedback instrument that allows leadership evaluators to compare leader self-reported scores with constituent reported scores (Posner & Kouzes, 1988). The instrument is considered a 360-degree evaluation due to feedback is provided from multiple levels within the organization including boss, peer, colleagues, and direct reports (Posner & Kouzes, 1988; Harrelson, Gardner, & Winterstein, 2009). Instruments designed for 360-degree feedback are commonly used in organizations to provide leaders and managers with constructive interpretations of their leadership behaviors (Harrelson, Gardner, & Winterstein, 2009). The assessment results are a combination of quantitative and qualitative data that should not be used for performance evaluations, but instead

used for personal growth and development (Harrelson, Gardner, & Winterstein, 2009). The LPI was first developed by Kousez and Posner in the 1980s and has since been utilized by various organizations globally to assist with leadership assessment and training (Posner & Kouzes, 1988; Northouse, 2010). The LPI-360 measures frequency of leadership practice use (Kouzes & Posner, 2013c). The higher the leadership practice score indicates a leader is portraying specific leadership behaviors (model, inspire, challenge, enable, or encourage) more frequently than the others (Kouzes & Posner, 2013c).

Situational Leadership Theory

Situational leadership is a commonly recognized and utilized leadership style. This approach is based on the leader's ability to adapt their leadership behaviors according to various situations. From a situational perspective, effective leaders are determined by their ability to assess their followers' competence and needs and then change their leadership behavior from directive or to more supportive (Northouse, 2010). This theory was first developed by Hersey and Blanchard (1969). The theory states there is not one leadership style that is universally successful (Hersey, 1969). Their research indicates different leadership behaviors and practices are necessary for different situations and people in order to gain the greatest amount of success (Harrelson, Gardner, & Winterstein, 2009). Within an organization, a senior level member may have more experience and maturity and would need less supervision and guidance. A younger or newer member may not have the same level of expertise as their peers and would need more direction from the leader.

Hersey and Blanchard (1969) described the need to identify and utilize appropriate leadership behaviors based on constituent maturity. This model describes four leadership styles necessary for leaders to apply in any given situation: telling (directing), selling (coaching),

participating (supporting), and delegating (Platt, 2000; Harrelson, Gardner, & Winterstein, 2009; Northouse, 2010).

Telling Style. This behavior assists organization members by giving them specific directions with less support; as in a directive leadership style (Platt, 2000; Northouse, 2010). The leader commands direction and is the primary decision maker. This is best utilized when the constituent is a novice at the skill or task, has a low competency level, and needs to be shown how to complete the task (Harrelson, Gardner, & Winterstein, 2009).

Selling Style. This behavior requires the leader to communicate thoughts and ideas while allowing the member to provide minimum input (Platt, 2000; Northouse, 2010). The leader is directly involved with the member and may ask the constituent for suggestions, but the leader is still the primary decision-maker. This behavior is best used when the member has a low to moderate competency and commitment level (Harrelson, Gardner, & Winterstein, 2009).

Participating Style. This behavior allows the member to accomplish goals while receiving continuous support, feedback and praise from the leader (Platt, 2000; Northouse, 2010). Decision making slowly shifts from the leader to the member or employee (Harrelson, Gardner, & Winterstein, 2009). The leader is able to instill confidence within this member to further enhance their skills. This behavior is best used when the member has a moderate to high competency level (Harrelson, Gardner, & Winterstein, 2009).

Delegating Style. This behavior allows the member to have full responsibility and decision making ability of the task at hand (Platt, 2000; Northouse, 2010). The leader demonstrates low supportive and directive behaviors (Harrelson, Gardner, & Winterstein, 2009). This member requires little guidance, has gained valuable experience, and has reached their maximum maturity and competence level (Platt, 2000).

Common characteristics have been distinguished among leaders' situational behaviors: effective leaders portray appropriate behavior for the situation at hand, are task-oriented, and have a strong regard for group member relationships (Yulk, 2006). Those who desire to lead must be prepared for various circumstances and recognize when and how to utilize appropriate behavior. With regards to athletic training clinical education, research (Platt-Meyer, 2002a) found athletic training clinical preceptors were most effective when they adapted their teaching style to students' needs, readiness, competence, and commitment.

Trait Leadership Theory

The trait approach leadership theory evaluates great leaders from history and focuses on their instinctive qualities (Northouse, 2001; Kutz, 2007). These specific leadership traits can either be innate or heritable qualities, or the leader may be able to develop specific traits over time with training (Yoder-Wise, 2003). Specifically, leader traits are defined "as relatively coherent and integrated patterns of personal characteristics, reflecting a range of individual differences that foster consistent leadership effectiveness across a variety of group and organizational situations" (Zaccaro, 2007, p. 7). Leader traits are accompanied by a variety of personal qualities that can contribute to leader effectiveness. Personal qualities include motives, values, cognitive abilities, social and problem-solving skills, and expertise (Zaccaro, 2007). It was once believed that these qualities only belonged to "great" (Northouse, 2010, p. 15) people who were born with specific traits.

The element behind trait leadership theory is that there are a range of qualities that differentiates leaders from non-leaders (Zaccaro, 2007). These traits may also determine that even though one leader may be successful in a particular area of expertise, they may not be as effective in alternate situations due to trait conflicts (Zaccaro, 2007). In 1948, Stogdill

completed a review which determined in multiple situations leaders and non-leaders could not be determined solely based on a specific set of traits. During a secondary study published in 1974, Stogdill presented traits or characteristics along with situational factors as determinants of effective leadership. This evidence is important for those who are in positions of authority who have not completed leadership courses or training, but strive to enhance their leadership abilities. These specific leadership traits can be the basis for leadership assessment, training, and development (Zaccaro, 2007). Northouse (2010) reviewed works from 1948 through 2004 and determined common leadership traits noted by researchers, which include: “intelligence, self-confidence, determination, integrity, and sociability” (p. 19). This could be vital information for those who desire to hone or assess their leadership skills.

A study focused on athletic training education recognized that students will learn effective leadership behaviors by observing their instructors or mentors (Platt-Meyer, 2002a). Leaders should recognize and enhance their own leadership traits in order to become beneficial role models for their students or organization members. Furthermore, “to be an effective leader, one must recognize how others perceive your leadership style and be aware of your own preferred style” (Platt-Meyer, 2002a, p. 262). Harrelson, Gardner, and Winterstein, (2009) support this claim and note “a successful leader must have a heightened awareness about his or her strengths and weaknesses, his or her patterns of behaviors, and the impact he or she has on others” (p. 3). Health care directors from various organizations have benefited from knowing their leadership traits and behaviors. A study investigated internal medicine residents’ perceptions of attending physicians’ leadership abilities throughout their residency (Adjei, 2010). Results indicated that although the physicians were experts in their field, they lacked leadership development and competency (Adjei, 2010). A similar study was conducted investigating

university Presidents' perception of their leadership styles and how their knowledge and leadership behavior relates to the University's mission of higher education (Arceo, 2010). The study discovered that Presidents' leadership styles and effectiveness varied according to the Presidents' personality; a similar notion to the trait-leadership theory. The results verified that authoritarian leadership limited the achievement of the university's mission and goals (Arceo, 2010). Results suggest that more collaboration and delegating leadership styles would create more efficient institutional outcomes (Arceo, 2010). This research finding further confirms the importance of those who are in a position of leadership to fully engage in and understand effective leadership behaviors.

Leadership in Athletic Training

Athletic training literature clearly supports the need for leadership knowledge and practices within the athletic training profession. Leadership characteristics that have identified an efficient athletic trainer include knowing yourself, leading by example, knowing your people, portraying loyalty, and knowing your profession (Nellis, 1994). These leadership competencies are necessary for developing successful practitioners. The past decade has brought about rapidly changing educational reforms causing a great need for leadership within athletic training education (Peer & Schlabach, 2009; Zuest, 2003; Kutz, 2010). Athletic training educators must recognize and develop their leadership skills in order to better serve their students. Students will learn and develop their leadership skills through the instructor by observing and mimicking behaviors (Platt-Meyer, 2002a; Peer & Schlabach, 2009). In order for athletic trainers, and athletic training students, to become quality professionals who provide efficient healthcare, and remain competitive in the allied health care field, leadership knowledge is imperative (Peer & Schlabach, 2009; Kutz, 2008; Kutz, 2010; Drake, 2014). A solid foundation in leadership

competency may contribute to the development of future athletic training leaders (Kutz, 2010; Drake, 2014).

The Board of Certification published the *Role Delineation Study for the Entry-Level Athletic Trainer* (RDS) which recognizes leadership as an essential component of athletic training responsibilities (BOC, 2010). The RDS defines the content on the national Board of Certification examination and identifies six practice domains for certified athletic trainers (BOC, 2010 & Kutz, 2006). The six practice domains are identified as prevention, clinical evaluation and diagnosis, immediate care, treatment, rehabilitation and reconditioning, organization and administration, and professional responsibility (BOC, 2010). Specific aspects in each domain describe characteristics of leadership. Within the organization and administration domain, the performance requirements state certified Athletic Trainers (ATC) must have “knowledge of leadership styles” (BOC, 2010, p. 28; Kutz, 2006, p. 1); however, specific leadership styles are not identified. The domains of health care administration and professional development and responsibility also mention various aspects of leadership are needed, but again do not give specific examples of leadership behavior (Kutz, 2006). This dilemma further stresses the importance of leadership development within athletic training.

Leadership is an essential component for health care professionals not only in the clinical setting, but also in the classroom setting (Kutz, 2008). Due to the reform in athletic training education and the increased standards over the past decade, elements of leadership have become more important within athletic training education (Delforge, 1999 Kutz, 2008; Kutz, 2015). Kutz, (2008) presented three leadership content items were deemed most “important for professional preparation within athletic training education (p. 209). These leadership content items included “risk management of legal issues, team leadership, and evidence-based medicine”

(Kutz, 2008, p. 210). The results imply that an athletic training educational program should fully prepare its students to understand and manage legal threats, work together within a group, and utilize current research for clinical decision making (Kutz, 2008). Kutz's (2010) continued research determined "leadership competence is indeed perceived to be an important aspect of athletic training education" (p. 273). It is the responsibility of the athletic training educators to formally develop students' leadership competence. Within Kutz's (2015) more recent research, results indicated regardless of position or degree type, athletic trainers perceive leadership behaviors and competence to be an essential component of athletic training education (Kutz, 2015). Students who develop and engage in leadership practices during their undergraduate collegial experience are more likely to obtain a job and a leadership role within the health care profession (Katch et al., 2013; Drake, 2014). Athletic training educators should consider leadership as a core competency within education program curriculum (Kutz, 2007).

Kutz's (2012a) leadership research in athletic training continued, and in the spring of 2012 he published a conceptual framework specifically for athletic training in order to integrate "leadership into clinical practice" (p. 27). The study supports the claim that leadership can be learned through "formal education, trial and error, and observation" (Kutz, 2012a, p. 25). The conceptual framework consists of two core areas including formal education and clinical application (Kutz, 2012a). Formal education involves properly integrating the foundations of leadership competencies and content, such as theories or skills, applicable within athletic training into an educational curriculum. Then, the second step within the conceptual framework is clinical application (Kutz, 2012a). This process occurs when the theories and skills taught within the curriculum are observed and practiced by athletic training students and professionals. Constant feedback is provided to the athletic training students through self-reflection, peers, and

preceptors (Kutz, 2012a). The conceptual framework described can be utilized within any stage of an athletic training education curriculum and is a helpful starting point for athletic training educators (Kutz, 2012a).

“Leadership development is a life-long responsibility” (Kutz, 2012a, p. 26) that continues as the athletic training student begins their professional career. Employers recognize leadership as a desirable characteristic of certified athletic trainers (Kutz, 2007). When hiring athletic trainers, employers look for common traits, such as professional knowledge and confidence, effective communication skills, and leadership, which includes decision making skills and the capability to learn from mistakes (Carr & Volberding, 2012; Drake, 2013). Leadership does not only stem from program directors or the department heads. Leadership can come from within an organization, from many employees at various organizational levels (White, 2005). Head athletic trainer positions involve management and leadership duties, while staff athletic trainer positions are primarily responsible for patient health care. Regardless of position, athletic trainers do not work alone and must be able to contribute effectively to the organization. Both parties serve an important role within an athletic training department and both must work together for leadership to occur (Rost, 1991; Handlos, 2014). Leadership is a relationship between leader and follower and each must accept responsibility for their own roles within the organization (Rost, 1991; Northouse, 2010; Handlos, 2014). Leadership competence will enable athletic trainers to be competitive with other allied health care professionals in a highly competitive job market.

Additional studies have also examined leadership characteristics needed to become a quality athletic trainer. Laurent and Bradney (2007) described portraying quality leadership skills has been demonstrated to increase productivity, improve the work environment, reduce

burnout, and increase employee satisfaction. Peer and Schlabach (2009) suggested athletic training leaders should develop a professional identity that transitions into enculturation; the process where students internalize distinct leadership qualities into behaviors and attitudes. Another study (Raab, Wolfe, Gould, & Piland, 2011) determined important athletic training characteristics include the ability to care, show commitment, value professional knowledge, and effectively communicate. Members of an athletic training education program are also expected to demonstrate adequate leadership behaviors and knowledge of leadership styles to serve as role models for athletic training students (BOC, 2010; Peer & Schlabach, 2009). Portraying quality leadership behaviors enables athletic training educators to effectively develop and motivate young learners (Peer & Schlabach, 2009). Athletic training educators are in direct contact with athletic training students on a daily basis and can greatly influence their decisions or behavior. Leadership can reinstate credibility to a program or organization, create positive working environments, establish positive working relationships, and often instill necessary changes (Kutz, 2008).

Preceptor Leadership

Certified athletic trainers who mentor athletic training students within an undergraduate education program are known as preceptors, or clinical instructors. Leadership behaviors of athletic training preceptors are important for developing students into competent and quality athletic trainers (Curis, Helion, & Domsohn, 1998; Platt-Meyer, 2002; Kutz, 2012b). Clinical preceptors often use situational leadership styles (Platt-Meyer, 2002a; Levy et al., 2009). Hersey first developed the situational leadership model in the 1960s to describe “the relationship and task between the appropriate behavior and response by the leader based on the follower’s maturity level” (Platt-Meyer, 2002a, p. 262). A preceptor must be able to recognize their

students' maturity and comfort levels when mentoring during real-time athletic training situations. Younger students with a lower competence level, but high commitment level, may need more assistance and guidance from the preceptor when first performing tasks. As the student matures and becomes proficient in their abilities, the preceptor can provide less assistance and guidance (Platt, 2000). Preceptors that use situational leadership are able to decrease their authority and allow the student to take on more challenging tasks (Platt-Meyer, 2002a). Athletic training students will learn leadership behaviors through observing their clinical preceptor. Preceptors should possess a variety of leadership behaviors in order to offer their students the most beneficial clinical education experience. Platt (2000) performed a study to validate a leadership evaluation tool for clinical instructors. The study found five specific leadership variables that predict teacher effectiveness: professional attitudes, characteristics of effective leaders, communication skills, teaching abilities and attitudes, and personal attributes (Platt, 2000, p. 89). It is important for athletic training educators to hone their personal leadership skills by utilizing these specific variables when relating to athletic training students (Platt, 2000).

Levy, Gardner, Barnum, Willeford, Sexton, Guyer, and Fincher (2009) further supported the concept of athletic training preceptors as situational leaders. The research suggested adapting a situational leadership model, known as *Leadership and the One Minute Manager* (Blanchard et al., 1985), into the athletic training clinical education setting (Levy et al., 2009). This model described a constant interaction between the preceptors' leadership behaviors and the athletic training students' needs and abilities (Blanchard et al., 1985; Levy et al., 2009). Clinical preceptors are able to learn the situational leadership model through preceptor workshops or training performed by the athletic training education program's clinical education coordinator.

In the 1990s, preceptor training in allied health care began utilizing the *One Minute Preceptor* (Neher & Stevens, 2003). This framework is a five-step model for clinical teaching in real-life settings. A learner may assess an actual patient with supportive discussions and advice from the preceptor (Neher & Stevens, 2003). Athletic training educators should consider leadership training not only for students, but for preceptors as well. Effective leadership within a clinical setting promotes positive clinical behaviors from both the clinician and student (Kutz, 2012). Athletic training students who perceived their preceptor as mentoring, accepting, nurturing, and modeling reported positive outcomes during their clinical education experience (Neil, Helion, & Domsohn, 1998). A similar study (Laurent & Weidnert, 2001) supported this finding. Modeling professional behavior was considered the most helpful characteristic demonstrated by the clinical preceptor (Laurent & Weidnert, 2001).

Program Director Leadership

The *Standards* require program directors to possess sufficient leadership skills for their educational programs (CAATE, 2012). Studies (Laurent & Bradney, 2007; Herzog & Zimmerman, 2009; Meyer, 2012; Odai, 2012) have suggested athletic trainers demonstrate transformational leadership behaviors; however, program directors portray different aspects of transformational leadership behaviors due to their education program responsibilities. Laurent and Bradney (2007) researched the frequency of transformational leadership use between head athletic trainers and athletic training program directors using the Leadership Practice Inventory survey (Kouzes & Posner, 1988). Results indicated program directors portrayed inspiring, challenging, enabling, and encouraging behaviors more than other athletic trainers in leadership positions (Laurent & Bradney, 2007). This finding may be due to the role and responsibilities program directors carry when in charge of an educational program (Laurent & Bradney, 2007).

The goal of program directors is to develop their athletic training students into young, successful professionals, so program directors may view leadership and leadership development more importantly than clinical athletic trainers (Laurent & Bradney, 2007). Additionally, female athletic training program directors scored higher in the modeling, challenging, and encouraging components than did the male program directors (Laurent & Bradney, 2007). Little research has been conducted on differences between male and female athletic training leadership behaviors and practices. Tourangeau's (2003) study suggested that women are inclined to build relationships within organizations while men strive to accomplishing goals and specific tasks.

Other studies also investigated athletic training program directors transformational leadership behaviors. Zuest's (2003) study investigated program directors' perceived leadership behaviors, leadership outcomes, leadership effectiveness, and follower satisfaction using a leadership measurement instrument known as, the Multifactor Leadership Questionnaire-5 (MLQ). Results presented that "program directors utilized the five transformational leadership behaviors in Bass' Full-Range of Leadership Model" (Zuest, 2003, p. 60). These transformational leadership behaviors include idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual motivation, and individualized consideration (Zuest, 2003). Another study (Meyer, 2012) utilized the MLQ to investigate the impact of program director leadership behavior on athletic training student competence. Findings suggested athletic training educators who influenced students through leadership behaviors predicted first-time pass rates on the Board of Certification examination (Meyer, 2012). Leadership behaviors included discussing values and beliefs, emphasizing a sense of purpose and organizational mission, and understanding moral and ethical decisions (Meyer, 2012). These leadership behaviors have also been suggested to improve relationships and communication

between program directors and athletic training clinical educators (Herzog & Zimmerman, 2009).

Program director leadership may also influence the perceptions of athletic training education program members, professionals and students. Program directors are viewed as empathic and advocates for their students, so they are in a critical position for the preparation of future professionals (Leone et al., 2008). Portraying effective leadership behaviors has been found to be positively associated with employee job satisfaction, productivity, and organizational commitment (McNeese, 1995). Athletic training students who had a positive perception of the athletic training profession were more likely to commit and complete an undergraduate athletic training education program (Benes & Mazerolle, 2014; Bowman et al., 2015). Program directors should strive to provide a stimulating atmosphere to help motivate their students, as well as develop student confidence and passion for the athletic training profession (Benes & Mazerolle, 2014; Bowman, Hertel, & Wathington, 2015). Athletic training educators are able to provide consistent leadership that creates an “environment that fosters retention [and] individual attention” (Bowman, Hertel, & Wathington, 2015, p. 5). Program directors who delivered individual attention, or a student-centered approach, to their students created feelings of value and importance which fostered greater student-learning (Bowman, Dodge, & Mazerolle, 2015).

Emotional intelligence is a leadership component that has often been noted used among transformational leaders (Kutz, 2006). Emotional intelligence can be defined as the ability to recognize emotions of oneself or others and the ability to cope with or compensate for emotional and relationship changes (Kutz, 2006). A study conducted on burnout rates and factors for burnout among athletic trainers found that women experienced higher levels of emotional burnout as undergraduate athletic training education program directors (Walter et. al, 2009).

There is minimal evidence supporting the claim that emotional burnout rates correlate with levels of emotional intelligence. Yet, is imperative for program directors to understand their leadership behaviors to effectively lead their organization as well as maintain peer and student satisfaction (Walter et. al, 2009).

Summary

As athletic training education continues to grow and reform, the educators and administrators responsible for shaping young professionals must also increase their leadership knowledge and behaviors (Laurent & Bradney, 2007; Levy et al., 2009; Leone, Judd & Colandreo, 2008; Kutz, 2012b). Educators must be aware of their leadership behaviors in order to inspire and influence athletic training students (Kutz, 2008). Demonstrating effective leadership skills has been proven to improve the efficiency of athletic training services; however, little research has been conducted on direct links between specific program director leadership behaviors and athletic training student success within the athletic training program (Laurent & Bradney, 2007; Meyer, 2012). Although differences between male and female program directors have been discovered, research still lacks in this area (Laurent & Bradney, 2007). Further research is needed as to why male and female program director may differ in their leadership behaviors. Leadership continues to be an important aspect in the athletic training profession (Platt-Meyer, 2002a ; Peer & Schlabach, 2009; Kutz, 2008; Herzog & Zimmerman, 2009; Kutz, 2010; Drake, 2014). It is essential that program directors recognize differences amongst their leadership behaviors in order to compensate for student needs and maintain a successful educational program.

CHAPTER 3

METHODOLOGY

Chapter 3 presents a description of the research methodology used for this investigation. The purpose of this study was to explore the relationships between athletic training students' perceptions of their undergraduate program director's leadership practices (model, inspire, challenge, enable, and encourage) and overall athletic training program success. Program success was measured by the Board of Certification (BOC) examination performance; specifically program first attempt passing rates. Programs that achieved a 70% or greater first attempt pass rate are deemed in compliance by national accreditation standards from the Commission on Accreditation of Athletic Training Education (CAATE). The methodology included a quantitative approach with use of an online survey to explore any relationships between the variables.

This study focused on specific leadership practices that could potentially influence overall athletic training student performance on the national BOC exam. The five leadership practices (model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart) were studied using the Leadership Practices Inventory-360 (LPI) online survey (Kouzes and Posner, 2002). To gain insights from each participant's viewpoint, the LPI-Self survey was completed by athletic training program directors and the LPI-Observer survey was completed by the program directors' respective athletic training students. Open-ended questions were asked at the end of the survey to gain demographic information about athletic training students.

Utilizing both survey instruments enabled the researcher to describe any relationships between athletic training students' perceptions of their program director's leadership practices

and program director self-reported leadership practices, as well as the degree of influence on students' national BOC exam pass rates. Understanding which leadership practices are influential to athletic training students and their success could be useful for future program directors when attempting to be efficient leaders within their program.

Research Questions

1. Are there differences between Program Director self-reported leadership practices (model, inspire, challenge, enable, and encourage) and students' perceptions of Program Director leadership behaviors?
2. Are there relationships between students' perceived Program Director leadership practices (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination?
 - a. Are there relationships between Program Directors' self-reported leadership practices (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination?
3. Do specific Program Director leadership practices (model, inspire, challenge, enable, and encourage) predict institutional first-attempt passing rates on the national athletic training BOC examination?
4. To what extent do male and female program directors portray different leadership practices (model, inspire, challenge, enable, and encourage) as perceived by undergraduate athletic training students?
 - a. To what extent do male and female program directors self-report portraying different leadership practices (model, inspire, challenge, enable, and encourage)?
5. To what extent do determinants support or hinder institutional BOC exam passing rates?

- a. Determinants considered were: students' SAT scores, students' GPA, completion of a BOC exam preparation course, the time (month) the BOC exam was attempted, size of institution or NCAA affiliation and prior leadership training completed by the Program Director.

Null Hypotheses

1. H_0 : There are no differences between Program Director self-reported leadership practices (model, inspire, challenge, enable, and encourage) and students' perceptions of Program Director leadership behaviors.
2. H_0 : There are no relationships between students' perceived Program Director leadership practices (model, inspire, challenge, enable, and encourage) and institutional passing rates on the Board of Certification exam.
 - a. H_0 : There are no relationships between Program Directors' self-reported leadership practices (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination.
3. H_0 : Specific Program Director leadership practices (model, inspire, challenge, enable, and encourage) will not predict institutional first-attempt passing rates on the national athletic training BOC examination.
4. H_0 : Male and female Program Directors will not portray different leadership practices (model, inspire, challenge, enable, and encourage) as perceived by undergraduate athletic training students.
 - b. Male and female Program Directors will not self-report different leadership practices (model, inspire, challenge, enable, and encourage).
5. Determinants will not support or hinder institutional BOC exam passing rates.

Research Design

A descriptive design was used for this study. Relationships explored were athletic training program director leadership practices (model, inspire, challenge, enable, and encourage) as the independent variable and the relationships between athletic training program performance on the BOC examination as the dependent variable. Leadership practices were defined by Kouzes' and Posner's (2002) The Five Practices: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. The frequency of leadership behavior use was measured by the Leadership Practices Inventory-360 (LPI) online survey developed by Kouzes and Posner (2002). Analysis of program director and athletic training student perceptions of portrayed leadership practices determined if correlations existed between the participants and overall program performance as described by BOC exam pass rates. The BOC exam performance was a valid means of measuring performance within an athletic training program. National accreditation standards required undergraduate athletic training programs achieve at least a 70% first attempt pass rate over a 3 year aggregate in order to be in compliance and maintain program accreditation.

The dependent variable for this investigation was program performance on the BOC examination (first-attempt passing rates). The independent variables within this investigation were athletic training students' perceived leadership practices of their program director and program director self-reported leadership practices (model, inspire, challenge, enable, and encourage) as measured by the Leadership Practices Inventory survey. Additional independent variables that contributed or hindered BOC exam performance were determined within the demographic portion of the survey. These variables included student age, disabilities, grade

point average, SAT score, race, gender, BOC exam preparatory course, size of institution or NCAA affiliation, and prior program director leadership training.

Participant Selection

The population studied consisted of undergraduate entry-level athletic training education program students from Commission on Accreditation of Athletic Training Education (CAATE) accredited athletic training programs, as well as their undergraduate athletic training program director. Athletic training students were upperclassmen (sophomores, juniors, and seniors) who had been officially accepted into the athletic training program. A regional sample of five undergraduate CAATE accredited athletic training programs was selected for the study. The institutions were NCAA Division I, II and III organizations located in the mid-Atlantic region. The names of the institutions were not revealed to protect the identity of the participants. Subjects who participated include five undergraduate athletic training program directors and their corresponding athletic training students within their program. Program directors completed the leader portion of the survey, the LPI-Self, and the athletic training students completed the observer portion, the LPI-Observer.

Setting

Participants were enrolled or currently employed at NCAA Division I, II, and III universities. Subjects completed online surveys either on-campus within computer labs or on personal computers at their own convenience. On-campus computer labs were reserved for survey participants only in order to accommodate for learning disabilities, decrease distractions, and to ensure confidentiality of subjects' responses. Participants who chose to complete the survey on their own computers did so on their own time in a setting that was convenient for them.

Materials

The materials used for the survey consisted of invitation of participation letter (Appendix A), informed consent letters (Appendix B and C), program director and student survey instructions (Appendix D and E), and an online version of the instrument: the Leadership Practices Inventory-360 (LPI). The online surveys included electronic instructor and student leadership workbooks available for all program directors once the survey was completed.

Instrument

The Leadership Practices Inventory-360 (LPI) was used to gather athletic training student perceptions of program directors' leadership practices, as well as to determine program directors' self-reported leadership practices. The LPI-360 is a leadership development tool consisting of the LPI-Self survey, which was completed by the program director, and the LPI-Observer survey, which was completed by the athletic training student (Kouzes & Posner, 2002). The LPI measured the reported frequency use of The Five Practices: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart, from each participant (Kouzes & Posner, 2002). The original LPI and the innovative LPI-360, which was used in this study, was created and then revised by James M. Kouzes and Barry Z. Posner (Kouzes & Posner, 1988; Posner & Kouzes, 1993). The LPI has been utilized often within nursing research and other allied healthcare fields. The nursing profession has been used as a helpful contrast for athletic training professionals and athletic training studies in the clinical and academic settings (Tourangeau, 2003). The LPI research instrument is highly regarded in both the academia and practitioner realm and has been utilized for years by various organizations (Tourangeau, 2003; Kouzes & Posner, 2002). The LPI was chosen for this study due to its ability to measure transformational leadership and its conceptual framework surrounding The

Five Practices of Exemplary Leadership®: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart (Tourangeau, 2003; Kouzes & Posner, 2002). These leadership practices complement the conceptual framework described by transformational and trait-approach leadership theories. The LPI contains 30, ten-point Likert scale statements and takes approximately ten to fifteen minutes to complete (Kouzes & Posner, 2002). The LPI has been deemed valid and reliable by the creators; the internal reliability measured by Cronbach's Alpha >.75 level (Posner & Kouzes, 1993; Kouzes & Posner, 2002).

A demographic survey accompanied the LPI-Observer survey, which included questions regarding athletic training students' age, gender, grade point average, National Athletic Trainers' Association district location of institution, BOC exam performance (recorded as first attempt passing rate), and number of BOC prep courses completed. All responses were collected through the LPI's online assessment and data collection platform. This platform allowed the researcher to create, track, and manage the surveys. Once surveys were submitted, the platform completed an automatic scoring system with online data storage. All responses were kept confidential and stored within the online data storage system that was password protected where only the researcher possessed access. The survey was approved by the Institutional Review Board at Indiana University of Pennsylvania. The Institutional Review Boards from each participating university also approved this study.

Equipment

The equipment needed to complete the surveys were computers, desk tops or lap tops, with internet access. Programs that requested researcher assistance with the surveys also needed an on-campus computer lab reserved strictly for study participants. Survey instructions were

sent electronically to each participant with detailed information about how to log-in and complete the survey.

Procedures

A regional sample of five accredited undergraduate athletic training programs was chosen for this study. Each program was required to have current accreditation status from the Commission on Accreditation of Athletic Training Education (CAATE). The institutions were NCAA Division I, II, and III organizations located in the mid-Atlantic region. Each athletic training program was located within the National Athletic Trainers' Association Districts II and III. The names of the institutions were not revealed to protect the identity of the participants.

During the 2015-2016 academic year, undergraduate athletic training program directors from each institution were e-mailed invitation of participation letters and informed consent letters (Appendix A, B, and C). The program directors' e-mail addresses were retrieved from the national accreditation web site (www.caate.net) and were used for distributing participation requests only. The purpose of the study and the participants' role was explained in the body of the e-mail. Once the program director agreed to participate, he or she was instructed to reply to the researcher's initial e-mail and complete the LPI-Self online survey. Upon the program directors' request, the researcher traveled to participating institutions to offer technical assistance with student survey completion. The researcher either met student participants as a group on-campus in reserved computer labs or was available for individual survey assistance on-campus in a private room strictly for study participants. Two programs did not request on-campus researcher assistance and maintained communication electronically via e-mail. Each participant completed informed consent documents prior to completing the survey. The participants also

received an electronic copy of survey instructions which included the researcher's contact information (Appendix D and E).

Once registered within the online LPI system, all program directors were assigned an alternate user name; the first name was a randomly assigned number and the last name was coded "Leader". All students were randomly imported into the LPI system as Student 1, Student 2, Student 3, and so on. The program director did not have access to students' alternate identification name nor did they know which students participated in the survey. The students' decision to participate or not had no affect on their course grades or their status within the athletic training education program. The researcher sent reminder e-mails to all participants once every week. All surveys were complete by the end of the spring 2016 semester.

Data Analysis

In this study, several research questions were developed in order to explore whether relationships existed between athletic training program director leadership practices, student perceptions of practiced behavior, and overall program performance on a national board of certification exam. Data were collected using the LPI's online assessment software program that allowed the researcher to create the online questionnaire, store incoming data, and transfer data directly into the LPI's online data analysis system. Participant responses remained confidential, and stored in the LPI's online platform where only the researcher had access. The researcher used Statistical Packages for the Social Sciences (SPSS) Statistics 22.0 to run various analytical tests and descriptive statistics from the data acquired from the survey.

Independent samples *t*-tests were used to analyze data collected from participants' viewpoints regarding how often the athletic training program director utilized the leadership practices. According to Brian Cronk (2006), an "independent samples *t*-test compares the means

of two samples” (p. 58). These results were tested to determine if significant differences exist between athletic training student reported and program director self-reported leadership practices. Results were also tested to explore significant differences between program director gender and participants’ perceptions surrounding the leadership practices. The study compared mean scores from student and program director viewpoints for each leadership practice: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart (Kouzes & Posner, 2002). These findings answered the first and fourth research questions.

To examine the second and fifth research questions, Pearson Correlation Coefficients were used when there were two scaled variables to examine relationships. Data analyzed included participants’ perception scores between frequency of leadership practice use and program pass rate on the national BOC examination. Frequency of leadership practice use was measured on a ten-point Likert scale ranging from 1-Almost Never to 10-Almost Always (Kouzes and Posner, 2013b). Each leadership practice (model, inspire, challenge, enable, and encourage) were considered against an annual program pass rate and a 3-year aggregate pass rate to determine the strength of relationships between the two variables. The researcher also used correlations to determine any significant findings between determinants that potentially support or hinder success on BOC exam and program pass rates.

To answer the third research question, simple linear regression analyses examined predictive values of one variable to another. Variables included were program directors’ self-reported leadership practices, student reported leadership practices, and athletic training program BOC exam pass rates. Descriptive statistics included the frequency of reported leadership

practices (model, inspire, challenge, enable, and encourage) between the program director self-reports and their athletic training student reports (Kouzes and Posner, 2013b).

Expected Findings

This study was designed to explore causal relationships and predictive suggestions between leadership practice scores and athletic training BOC success rates. It is expected that, although findings may not be of significant value, differences between participants' perceptions will offer helpful insights into the leadership role of an athletic training program director.

CHAPTER 4

RESULTS

Literature among leadership in athletic training education suggests administrators and preceptors are most successful when practicing transformational and situational leadership behaviors (Laurent & Weidnert, 2001; Laurent & Bradney, 2007; Platt-Meyer, 2002a; Platt-Meyer, 2002b; Levy et al., 2009; Meyer, 2012). This success is measured by student performance on the national Board of Certification (BOC) exam. Every year, BOC examination scores are interpreted into overall athletic training program pass rates; each program must report yearly pass rates and 3-year aggregate pass rates. Programs with a 70% or higher pass-rate over a 3 year term are deemed in compliance with accreditation standards. Those programs below 70% are placed on probation status. With regards to success and leadership, studies (Laurent & Bradney, 2007; Platt-Meyer, 2002a; Platt-Meyer, 2002b; Yellen, 2012; Odai, 2012) have specifically concentrated on athletic training programs and their program director's leadership behavior, but the researcher questioned viewpoints from other major constituents in the education program; the athletic training student. Comparing relationships between student-reports to program director self-reports will offer a more comprehensive evaluation of practiced leadership behaviors within athletic training education programs.

This chapter described the results and data analysis used within this study. A total of five undergraduate athletic training programs participated in this study. Quantitative data were collected using the Leadership Practices Inventory-360 online (LPI-360) (Kouzes & Posner, 2013b). The LPI-360 is an instrument used to measure the frequency of leadership behaviors portrayed among organizational leaders. These leadership behaviors are grouped into 5 basic practices: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act,

and Encourage the Heart (Kouzes & Posner, 2013a). The LPI-360 assessment divides these five practices further into 30 specific leadership behaviors. Each leadership practice is associated with six behaviors that are self-evaluated by a leader (the athletic training program director) and then the leader is evaluated by an observer (the athletic training student) (Kouzes & Posner, 2013b). Participants rated how frequently the leader engaged in each specific leadership practice using a 10-point Likert scale ranging from 1-Almost Never to 10-Almost Always (Kouzes & Posner, 2013a). The practices are listed in the table below and will be discussed further in this chapter.

Table 1

Athletic Training Undergraduate Program Director Leadership Behaviors Organized by Practice

Leadership Practice	Leadership Behavior
Model the Way	<ol style="list-style-type: none"> 1. Sets a personal example of what he/she expects of others. 2. Spends time and energy making certain that the people he/she works with adhere to the principles and standards we have agreed on. 3. Follows through on promises and commitments he/she makes. 4. Asks for feedback on how his/her actions affect other people's performance. 5. Builds consensus around a common set of values for running our organization. 6. Is clear about his/her philosophy of leadership.
Inspire a Shared Vision	<ol style="list-style-type: none"> 1. Talks about future trends that will influence how our work gets done. 2. Describes a compelling image of what our future could be like. 3. Appeals to others to share an exciting dream of the future. 4. Shows others how their long-term interests can be realized by enlisting in a common vision. 5. Paints the "big picture" of what we aspire to accomplish. 6. Speaks with genuine conviction about the higher meaning and purpose of our work.

Challenge the Process

1. Seeks out challenging opportunities that test his/her own skills and abilities.
2. Challenges people to try out new and innovative ways to do their work.
3. Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.
4. Asks “What can we learn?” when things don’t go as expected.
5. Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.
6. Experiments and takes risks, even when there is a chance of failure.

Enable Others to Act

1. Develops cooperative relationships among the people he/she works with.
2. Actively listens to diverse points of view.
3. Treats others with dignity and respect.
4. Supports the decisions that people make on their own.
5. Gives people a great deal of freedom and choice in deciding how to do their work.
6. Ensures that people grow in their jobs by learning new skills and developing themselves.

Encourage the Heart

1. Praises people for a job well done.
2. Makes it a point to let people know about his/her confidence in their abilities.
3. Makes sure that people are creatively rewarded for their contributions to the success of projects.
4. Publicly recognizes people who exemplify commitment to shared values.
5. Finds ways to celebrate accomplishments.
6. Give the members of the team lots of appreciation and support for their contributions.

Note. From “Leadership behaviors organized by practice” by J. M. Kouzes and B. Z. Posner, 2013a, *Leadership Practice Inventory Development Planner*, p. 14-16. Copyright 2013 by James M Kouzes and Barry Z. Posner. Reprinted with permission.

Description of Participants

This study researched five undergraduate level athletic training programs in the mid-Atlantic region (National Athletic Trainers' Association Districts II and III). The sample ($N = 86$) consisted of five undergraduate athletic training program directors, in which two were females and three were males, and 81 undergraduate athletic training students. Table 2 below describes the demographics of this study. At the time of the study, all five programs were accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

Table 2

Demographic Characteristics of Undergraduate Athletic Training Education Program

Participants

Demographic	Number of Participants
University Division	
NCAA D-I	1
NCAA D-II	2
NCAA D-III	2
Athletic Training Student (ATS)	
D-I ATS	22
D-II ATS	33
D-III ATS	26
Program Director Gender	
Female	2
Male	3
Program Director Highest Degree Earned	
Doctorate	3
Master's	2
Bachelor's	0

All participants completed the computer-based LPI-360 survey online. Program directors completed the LPI-Self survey and athletic training students completed the LPI-Observer survey.

To protect the autonomy of the students, the program directors did not know which students

completed the survey nor did they have access to student results. To further protect the autonomy of all participants, individual student BOC pass rates were not reported. Throughout this chapter, program pass rates were reported collectively for the 2014-2015 BOC testing period or collectively as a 3-year BOC aggregate score.

Quantitative Data

This study investigated the relationships between athletic training program directors' self-reported leadership behaviors and athletic training students' perceptions of such behavior. The table below describes the top ten frequently reported leadership practices and behaviors from this sample, ranked from most frequent to less frequent, based on the average of the program director and athletic training student responses. According to Kouzes' and Posner's (2013b) LPI-360 online Group Leadership Behaviors Ranking report:

A plus sign (+) next to the [Student Perceptions Score] indicates that the responses are more than 1.5 points higher than the [program directors'] Self-Reported responses. A minus sign (-) next to the [Student Perceptions Score] indicates that the responses are more than 1.5 points lower than the Self-Reported responses. Since 1.5 is approximately the average difference between self and observer scores, any difference greater than that merits attention. When there is no +/- symbol, this indicates a reasonable degree of agreement between the self and observer scores. The response scale runs from 1-Almost Never (does what is described in the statement) to 10-Almost Always (does what is described in the statement). (p. 2)

A higher value (closer to 10) represents more frequent use of that particular behavior. A score of "3" indicates behavior that is "not observed" or "has no basis for observing"; there was no N/A rating option given on the LPI-360 online (Kouzes & Posner, 2013c). The response

scale for Table 3 below is as follows: 1-Almost Never, 2- Rarely, 3-Seldom, 4-Oncein a While, 5-Ocasionally, 6- Sometimes, 7- Fairly Often, 8- Usually, 9- Very Frequently, 10- Almost Always (Kouzes & Posner, 2013b).

Table 3

Most Frequently Used Leadership Behavior Scores: Program Directors (PD) v. Athletic Training Students (ATS) Perspectives

Leadership Behavior	Leadership Practice	PD Self-Reported Score	ATS Score (+/-)
Treats others with dignity and respect.	Enable	9.6	8.9
Sets a personal example of what he/she expects of others.	Model	9.4	8.3
Follows through on the promises and commitments he/she makes.	Model	9.2	8.2
Paints the “big picture” of what we aspire to accomplish.	Inspire	9.4	8.1
Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.	Model	8.8	8.1
Develops cooperative relationships among the people he/she works.	Enable	9.0	8.0
Speaks with genuine conviction about the higher meaning and purpose of our work.	Inspire	8.4	8.0
Ensures that people grow in their jobs by learning new skills and developing themselves.	Enable	8.4	7.9
Praises people for a job well done.	Encourage	9.6	7.8-
Builds a consensus around a common set of values for running our organization.	Model	9.2	7.8

Note. From “Group leadership behaviors ranking,” by J. M. Kouzes and B. Z. Posner, 2013b, *Leadership Practices Inventory: LPI Group Assessment Report*, p. 2-3. Copyright 2013 by James M. Kouzes and Barry Z. Posner. Reprinted with permission.

The average scores presented above indicates the leadership practice “Enable” is most frequently used by athletic training program directors followed by the leadership practice “Model”. The most frequently reported used leadership behavior associated with “Enable” was: treats others with dignity and respect. The second most frequently reported leadership behavior associated with “Model” was: sets a personal example of what he/she expects of others. According to program directors self-reports, the leadership practice and behavior “Encourage: praises people for a job well done” is also most frequently used, with an equivalent “Enable” score of 9.6. “Inspire: paints a big picture” is also second most frequently used reported by program directors; this category scored comparable to “Model” with a 9.4 frequency ranking. However, athletic training student (ATS) reported scores revealed the leadership practice “Inspire” was ranked fourth with an 8.1 frequency score and “Encourage” was ranked ninth with a 7.8 frequency score. Program directors within this sample believed “Inspire” and “Encourage” was often portrayed as a leadership practice.

The average scores revealed an obvious discrepancy between the program director self-reported score and student reported score for the practice and behavior “Encourage: Praises people for a job well done”. The student reported score was marked with a minus (-) symbol which indicates those scores are more than 1.5 points lower than the self-reported program director scores; a reasonable degree of disagreement between the self and observer scores. The program directors reported a 9.6 frequency score while the athletic training students reported a -7.8 frequency score. According to students involved in the study, the leadership behavior

“Encourage: praises people for a job well done” is utilized less frequently among program directors. This inconsistency is reviewed further in this chapter when comparing male and female program director leadership behaviors.

Research Question 1

Are there differences between Program Director self-reported leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) and students’ perceptions of program director leadership behaviors? The null hypothesis states that there are no differences between program director and student reported leadership behaviors. Table 4 displays the average perceived leadership practice scores as self-reported by the program directors and athletic training students who participated in the study.

The scores presented below represent the average program director and student responses for each of the five leadership practices (model, inspire, challenge, enable, and encourage). The scores range from 6 to 60; a lower score representing a less frequent use of the leadership practice and a higher score indicating more frequent use of the leadership practice. The standard deviation (*SD*) measures the amount of distribution around the mean, or the average, score. A larger number indicates the distribution of scores is increasingly widespread (Kouzes & Posner, 2013b).

Table 4

Descriptive Statistics for Perceived Leadership Practices Reported by Program Directors (PD) and Athletic Training Students (ATS)

Leadership Practices	PD or ATS	<i>n</i>	Mean	<i>SD</i>
Model the Way	PD	5	50.4000	5.41295
	ATS	81	46.1111	10.95331
Inspire a Shared Vision	PD	5	47.4000	7.92465
	ATS	81	44.8025	12.04722
Challenge the Process	PD	5	47.2000	5.89067
	ATS	81	42.0864	12.85321
Enable Others to Act	PD	5	53.0000	2.12132
	ATS	81	46.0617	11.76791
Encourage the Heart	PD	5	46.4000	5.31977
	ATS	81	42.7407	13.75389

When comparing mean scores, it is apparent that program directors self-report higher frequency scores for each leadership practice (model, inspire, challenge, enable, and encourage). Athletic training students in this sample did not view their program director portraying leadership practices as often as self-reports indicate. The athletic training student responses had more widespread deviation from the mean scores when compared to the program director responses. The program directors within this sample were fairly consistent with their self-reported scores for model ($M= 50.4$, $SD= 5.4$), inspire ($M= 47.4$, $SD= 7.9$), challenge ($M= 47.2$, $SD= 5.8$), enable ($M= 53$, $SD= 2.1$), and encourage ($M= 46.4$, $SD= 5.3$). Student responses

varied high and low on the frequency response scale for model ($M= 46, SD= 10.9$), inspire ($M= 44.8, SD= 12$), challenge ($M= 42, SD= 12.8$), enable ($M= 46, SD= 11.7$), and encourage ($M= 42.7, SD= 13.7$). The specific leadership behaviors associated with these practices is outlined in Table 1.

A Levene’s test for equality of variances was also performed on the data set. Levene’s test indicated unequal variances for the leadership practice Enable ($F= 6.071, p= .016$), so the degrees of freedom for the corresponding t -test (see table 6) were adjusted from 84 to 28. The results of the Levene’s test were significant, suggesting evidence that the variances were unequal in this population which may be due to a small sample of participants.

Table 5

Levene’s Test for Leadership Practices Reported by Program Directors and Athletic Training Students

Leadership Practice	n	F	Sig
Model	86	2.268	.136
Inspire	86	1.204	.276
Challenge	86	3.255	.075
Enable	86	6.071	.016
Encourage	86	3.783	.055

* $p < .05$.

Table 6 displays an independent-samples t test comparing the variance of the mean scores among program director and athletic training student perceived leadership practices. The data found a significant difference between the program director and student responses for the

leadership practice “Enable” ($t(28)=4.295, p >.05$). The program director self-reported “Enable” leadership practice mean scores were significantly higher ($M= 53, SD= 2.12$) than the athletic training students reported mean scores ($M= 46, SD= 11.76$).

Table 6

Independent-Samples t Test for Perceived Leadership Practices Reported by Program Directors and Athletic Training Students

Leadership Practice	df	Mean Difference	Std. Deviation	t	Degree of Freedom	Sig. (2-tailed)
Model	28	4.2888	2.70946	1.583	6.258	.162
Inspire	28	2.59753	3.78838	.686	5.217	.522
Challenge	28	5.11358	2.99659	1.706	6.668	.134
Enable	28	6.93827	1.61545	4.295	28.491	.000
Encourage	28	3.65926	2.82762	1.294	7.915	.232

* $p < 0.05$.

The mean difference scores revealed obvious variances between program director self-reported leadership frequency scores and athletic training student reported leadership frequency scores. Even though the data showed “Enable” was the only significant leadership practice, “Challenge”, 5.11, and “Model”, 4.28, also received higher mean difference scores. This finding suggests that program directors in this study viewed themselves utilizing the leadership practices “Challenge” and “Model” more often than athletic training student reports. The average frequency scores between leadership practices “Inspire” and “Encourage” from athletic training students’ views and program directors were very similar to self-reports; the mean difference between the scores were 2.59 for “Inspire” and 3.65 for “Encourage”.

For this study, the null hypothesis is rejected; the only noticeable significant difference between program director and athletic training student perceptions is with the leadership practice “Enable”. Program directors self-report utilizing the leadership practice “Enable” more frequently than student reports. The six specific leadership behaviors related to “Enable” (“Enable Others to Act”) are outlined in Table 1 (Kouzes & Posner, 2013a).

Research Question 2

Are there relationships between students’ perceived Program Director leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination? The null hypothesis for this question states there are no relationships between athletic training students’ perceived program director leadership behaviors and institutional passing rates on the BOC examination. The LPI-Observer survey was completed by athletic training students to gain their perspectives.

A Pearson Correlation Coefficient was computed among athletic training students’ perceptions of their program directors’ five leadership practices (model, inspire, challenge, enable, and encourage) and overall program BOC pass rates for the 2014-2015 testing year, as well as a 3-year pass rate aggregate. The results displayed in Table 7 below suggest that correlations were statistically significant among all five leadership practices and athletic training program pass rates.

Table 7

Pearson Correlation among Students' Perceptions of Leadership Practices and Athletic Training Programs' Board of Certification (BOC) Exam Pass Rates (PR)

	BOC Exam PR		Leadership Practice				
	2014-2015 PR	3-Year Aggregate PR	Model	Inspire	Challenge	Enable	Encourage
BOC Exam PR							
2014-2015 PR	1.00						
3-Year Aggregate PR	.884**	1.00					
Leadership Practice							
Model	.401*	.415*	1.00				
Inspire	.388**	.377**	.906**	1.00			
Challenge	.375**	.392**	.922**	.928**	1.00		
Enable	.339**	.303**	.880**	.832**	.888**	1.00	
Encourage	.306**	.277*	.882**	.832**	.880**	.904**	1.00

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

A Pearson Correlation Coefficient was calculated for the potential influences between students' perceived leadership practice scores and overall program pass rates on the BOC exam.

A moderate positive correlation was indicated for 2014-2015 pass rate testing term among:

Model ($r(79) = .401, p < .05$), Inspire ($r(79) = .388, p < .01$), Challenge ($r(79) = .375, p < .01$),

Enable ($r(79) = .339, p < .01$), and Encourage ($r(79) = .306, p < .01$). A moderate positive

correlation was indicated for the 3-year aggregate testing term among: Model ($r(79) = .415, p <$

$.05$), Inspire ($r(79) = .377, p < .01$), Challenge ($r(79) = .392, p < .01$), Enable ($r(79) = .303, p <$

.01), and Encourage ($r(79) = .277, p < .05$). These correlations indicate a significant influence exists between the independent variables (2014-2015 pass rate, 3-year aggregate pass rate, and student perceived leadership practice scores). This finding suggests overall program BOC pass rates were satisfactory when athletic training students perceived their program director portraying all five leadership practices. Satisfactory BOC exam scores are defined as meeting accreditation standards by possessing a 70% or better first attempt pass rate.

It is interesting to note that the data revealed higher correlations numbers between students' perceived leadership practice scores and programs' 3-year BOC aggregate pass rate score for leadership practices "Model" and "Challenge" when compared to the 2014-2015 BOC pass rate score. All other leadership practices ("Enable", "Inspire", and "Encourage") revealed higher correlation numbers for the 2014-2015 pass rate scores. The 3-year aggregate pass rate Pearson Correlation Coefficient value for "Model" was higher at .415 when compared to the 2014-2015 pass rates Pearson Correlation Coefficient value for "Model" of .401. The 3-year aggregate pass rate Pearson Correlation Coefficient value for "Challenge" .392, while the 2014-2015 pass rate "Challenge" Pearson Correlation Coefficient value was .375. This outcome suggests there is a stronger correlation between students' leadership perceptions and the 3-year BOC aggregate pass rate. As athletic training students consistently and frequently view their program director using the leadership practices "Model" and "Challenge" over time, students' BOC first attempt pass rates will continue to be satisfactory.

The null hypothesis for this question is rejected since results from the Pearson Correlation Coefficient illustrate definite influences; BOC exam results were satisfactory for the 2014-2015 testing period, as well as for a 3-year aggregate term when athletic training students

perceived their program director utilizing all five leadership practices (model, inspire, challenge, enable, and encourage) simultaneously.

It is anticipated that connections between all five leadership practices were also found to have a reliable influence among each another. Significant correlations can be associated between the leadership practices model, inspire, challenge, enable, and encourage. A positive correlation was indicated for Model among: Inspire ($r(79) = .906, p < .01$), Challenge ($r(79) = .922, p < .01$), Enable ($r(79) = .880, p < .01$), and Encourage ($r(79) = .882, p < .01$). These results indicate that all five leadership practices possess significant influences between one another and when utilized often facilitate effective leadership behaviors.

Research Question 2a

Are there relationships between Program Directors' self-reported leadership behaviors (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination? The null hypothesis for this question states that there are no relationships between program directors' self-reported leadership behaviors and overall program passing rates on the BOC examination. The LPI-Self survey was completed by athletic training program directors to gain their perspectives.

A Pearson Correlation Coefficient was computed among athletic training program director self-reported perceptions of their 5 leadership practices (model, inspire, challenge, enable, and encourage) and overall program BOC pass rates for the 2014-2015 testing period, as well as a 3-year pass rate aggregate. The results displayed in Table 8 below suggest that significant correlations could be made for the leadership practice "Model" and the BOC pass rate for the 2014-2015 testing term. Significant correlations could also be made among the BOC 3-year aggregate pass rate and the 2014-2015 testing term pass rate.

Table 8

Pearson Correlation among Program Directors' Self-Reported Leadership Practices and Athletic Training Programs' Board of Certification (BOC) Exam Pass Rates (PR)

	BOC Exam PR		Leadership Practice				
	2014-2015 PR	3-Year Aggregate PR	Model	Inspire	Challenge	Enable	Encourage
BOC Exam PR							
2014-2015 PR	1.00						
3-Year Aggregate PR	.905*	1.00					
Leadership Practice							
Model	-.946*	-.869	1.00				
Inspire	.287	.120	-.541	1.00			
Challenge	.500	.162	-.591	.817	1.00		
Enable	-.176	.050	-.065	.238	-.300	1.00	
Encourage	.440	.315	-.667	.784	.579	.554	1.00

*Correlation is significant at the 0.05 level (2-tailed).

A significant negative correlation was demonstrated between the leadership practice “Model” and BOC pass rate from the 2014-2015 testing term ($r(3) = -.946, p < .05$). The data suggest program directors that self-rated higher leadership practice “Model the Way” scores would have programs that received lower annual pass rates. This correlation is only significant among “Model” and the 2014-2015 pass rate term and not the 3-year aggregate pass rate. This may be due to the study’s small sample size.

Programs that continually receive low pass rates will contribute to a lower 3-year aggregate pass rate and may not meet accreditation requirements; programs must maintain a 3-year aggregate pass rate of 70% or better. The null hypothesis from this study is rejected since there is a strong negative relationship between program director self-reported leadership practices score for “Model” and athletic training program BOC pass rates for the 2014-2015 testing term.

Another interesting result from this data illustrated a significant positive correlation between the 3-year aggregate pass rate scores and the 2014-2015 pass rate scores ($r(3) = .905, p < .05$). An increased 3-year aggregate pass rate score will determine increased annual pass rate scores. These results confirm programs that annually possess higher pass rate scores will then inevitably possess satisfactory 3-year aggregate scores and maintain accreditation compliance. It can be expected that in order to maintain accreditation standards, athletic training programs must achieve high first attempt passing rates annually on the BOC exam.

Research Question 3

Do specific Program Director leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) predict institutional first-attempt passing rates on the national athletic training BOC examination? The null hypothesis for this question states program directors’ leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) will not predict institution first-attempt passing rates on the national BOC exam.

The researcher was interested in differences between program director and athletic training student perceptions of portrayed leadership practices. Table 9 below outlines program director self-reported leadership practice scores compared to student reported leadership practice scores in relation to program 3-year pass rate aggregate scores.

Table 9

Descriptive Statistics for Perceived Leadership Practices Reported by Program Directors (PD) and Athletic Training Students (ATS) Compared to 3-Year Aggregate Pass Rates (PR)

	Model	Inspire	Challenge	Enable	Encourage	3-year Aggregate PR (Above/Below Standard)
PD 1	51	50	43	56	48	
ATS	49	48	46	46	44	Above
PD 2	44	56	54	54	55	
ATS	52	52	48	51	49	Above
PD 3	57	36	40	53	42	
ATS	37	36	32	39	34	Below
PD 4	46	43	47	51	43	
ATS	47	43	44	49	42	Above
PD 5	54	52	52	51	44	
ATS	45	43	41	47	44	Below

In order to collect the above data, program directors completed the LPI-360 Self survey and the athletic training students completed the LPI-360 Observer survey. The LPI-360 measured frequency of leadership practice utilization reported from both the leader (the program director) and the follower (the athletic training students) (Kouzes & Posner, 2013). Scores closer to 60 indicated the leader utilized that particular leadership practice more often than the other leadership practices. Program pass rate standards for 3-year aggregate scores are defined by the CAATE as meeting standards if the aggregate is 70% or higher and below standards if the aggregate is below 70% (CAATE, 2012). Differences between program director self-report and student reports are observable.

Athletic training students within each program reported lower perceived leadership practice frequency scores when compared to their program director for each leadership practice

category (model, inspire, challenge, enable, and encourage). This finding supports the data presented in Table 4; athletic training students in this sample did not view their program director portraying leadership practices as often as the self-reports indicated. Program directors that self-reported notably higher leadership practice scores, when compared to their student perception scores, were a part of programs with below standard pass rates. The researcher wanted to investigate this further. Stepwise linear regression analyses were conducted to determine any significant leadership practices that were predictive of program pass rates.

Stepwise linear regressions were calculated for athletic training students' perceptions of their program directors' leadership behaviors as well as program director self-reports of leadership behaviors and BOC pass rates for the 2014-2015 testing year. Stepwise linear regressions were also calculated for athletic training students' perceptions of their program directors' leadership behaviors, as well as program director self-reports of leadership behaviors and 3-year aggregate BOC passing rates. Each table will display the constant and the adjusted R^2 at the bottom of the table. The significance level has been set at $p < .05$. Table 10 illustrates data from the athletic training student responses for the 2014-2015 testing period.

Table 10

Stepwise Linear Regression for Athletic Training Student Perspectives of Program Director Leadership Behaviors and 2014-2015 First Attempt Board of Certification Exam Pass-Rate (PR)

Independent Variable	Model 1		
	Dependent Variable 2014-2015 PR		
	β	t	Sig
Model the Way	.401	3.895	.000
Constant		6.179	.000
Adjusted R^2	.150		

* $p < .05$.

Table 10 presents the results of the stepwise linear regression for predicting athletic training programs' BOC pass rate during the 2014-2015 testing period based on athletic training student perceived leadership behaviors of their program director. Leadership behaviors were defined by The Five Practices: model, inspire, challenge, enable, and encourage. A stepwise linear regression model was able to predict 15% of the variance in first time BOC exam pass rates for the 2014-2015 testing period. The variable "Model the Way" ($\beta = .410$) predicts 15% of the dependent variable first attempt pass rate. This variable has a positive β which indicates the more the athletic training student perceived their program director utilizing the leadership practice "Model the Way", the higher the pass rates would be for that program. When athletic training students perceived their program director utilizing the leadership practice "Model", they were 15% more likely to pass the BOC exam on the first attempt.

Table 11 below presents the results of the stepwise linear regression for predicting athletic training programs' 3-year BOC exam pass rate aggregate score based on athletic training

student perceived leadership practices of their program director. The table will display the constant and the adjusted R^2 at the bottom. The significance level has been set at $p < .05$.

Table 11

Simple Linear Regression for Athletic Training Student Perspectives of Program Director Leadership Behaviors and 3-year Board of Certification Pass Rate Aggregate (PR)

Independent Variable	Model 1		
	Dependent Variable 3-year Aggregate PR		
	β	t	Sig
Model the Way	.415	4.053	.000
Constant		9.785	.000
Adjusted R^2	.162		

* $p < .05$.

A stepwise linear regression was calculated predicting programs' 3 year BOC exam pass rate aggregate score based on student perceived leadership practices of their program director. A stepwise linear regression model was able to predict 16% of the variance in first time BOC exam pass rates for the 3-year aggregate BOC exam testing period. The variable "Model the Way" ($\beta = .415$) predicts 16% of the dependent variable first attempt pass rate. This variable has a positive β which indicates the more the athletic training student perceived their program director utilizing the leadership practice "Model the Way", the more likely the 3-year BOC exam pass rate aggregate will increase. When athletic training students' perceived their program director utilizing the leadership practice "Model", programs were 16% more likely to meet the 3 year BOC exam pass rate aggregate standard of 70% as determined by the CAATE. The null hypothesis for this study was rejected. The results from the regression analysis confirm athletic training students' perceived the leadership practice "Model the Way" as a predictor and positive

influence on annual and 3-year aggregate first attempt BOC examination passing rates. Specific leadership behaviors for “Model” are outlined in Table 1.

A stepwise linear regression was calculated predicting programs’ 2014-2015 BOC examination pass rate based on program director self-reported leadership practice scores. Program director self-reported scores were not predictive of annual BOC examination pass rates. A stepwise linear regression was also calculated predicting programs’ 3-year BOC examination pass rate aggregate based on program director self-reported leadership practice scores. Program director self-reported scores were not predictive of 3-year BOC examination pass rate aggregates.

Research Question 4

To what extent do male and female program directors portray different leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable) as perceived by undergraduate athletic training students? The null hypothesis for this question stated that male and female athletic training program directors will not portray different leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable) according to athletic training students. A total of five athletic training program directors participated in the study; three males and two females. Descriptive statistics were also used as an overview of the findings.

Table 12

Descriptive Stats for Male and Female Program Director (PD) Leadership Practice Scores

Perceived by Athletic Training Students

Leadership Practice	PD Gender	Mean	Std. Deviation
Model the Way	Male	43.3	11.90
	Female	51.1	6.46
Inspire a Shared Vision	Male	41.7	12.90
	Female	50.2	7.67
Challenge the Process	Male	39	13.70
	Female	47.5	8.90
Enable Others to Act	Male	43.3	11.90
	Female	50.8	9.98
Encourage the Heart	Male	39.9	14.50
	Female	47.6	10.60

Table 12 above describes the differences in male and female program director leadership behavior scores as perceived by their athletic training students. It is interesting to mention the discrepancies between male and female scores. For each leadership practice, female program directors were scored higher than male program directors by athletic training students within their programs. As mentioned earlier, the LPI survey measures frequency of leadership practices. A higher score indicates more frequent use of that particular leadership practice. The leadership practice “Model” had the highest score for female program directors ($M = 51.1, SD = 6.46$). The leadership practices “Model” ($M = 43.3, SD = 11.90$) and “Enable” ($M = 43.3, SD = 11.90$) had the highest scores for male program directors. The leadership practice “Enable” was second highest for female program directors ($M = 50.8, SD = 9.98$) and “Inspire” for male program directors ($M = 41.7, SD = 12.90$). The least frequently used leadership practice reported

by athletic training students was “Challenge” and “Encourage”; however, female program directors still scored higher for “Challenge” ($M = 47.5, SD = 8.90$) and “Encourage” ($M = 47.6, SD = 10.60$) than male program directors for “Challenge” ($M = 39, SD = 13.70$) and “Encourage” ($M = 39.9, SD = 14.50$). Specific leadership behaviors associated with each leadership practices are outlined in Table 1.

An independent-samples t test was conducted to compare the means from the athletic training student reported frequency scores. The table below describes the differences in male and female program director leadership practice scores as perceived by their students.

Table 13

Independent-Samples t Test for Program Director Leadership Practices by Gender as Perceived by Athletic Training Students

Leadership Practice by Gender	n	Mean Difference	Std. Deviation	t	Degree of Freedom	Sig. (2-tailed)
Model						
Male	52	-7.776	11.966	-3.240	79	.002*
Female	29	-7.776	6.460	-3.240	79	.002*
Inspire						
Male	52	-8.525	12.993	-3.228	79	.002*
Female	29	-8.525	7.671	-3.228	79	.002*
Challenge						
Male	52	-8.459	13.764	-2.976	79	.004*
Female	29	-8.459	8.906	-2.976	79	.004*
Enable						
Male	52	-7.531	11.906	-2.885	79	.005*
Female	29	-7.531	9.986	-2.885	79	.005*
Encourage						
Male	52	-7.708	14.599	-2.496	79	.015*
Female	29	-7.708	10.617	-2.496	79	.015*

Note: * $p < .05$

An independent-samples t test was calculated comparing the mean scores of program directors leadership practices by gender as perceived by athletic training students. Table 13 shows that the independent-samples t test revealed statistically significant difference in program director gender and leadership practices. Significant values were found between gender and leadership practices Model: ($t(79) = -3.240, p < .05$); Inspire ($t(79) = -3.228, p < .05$); Challenge ($t(79) = -2.976, p < .05$); Enable ($t(79) = -2.885, p < .05$); and Encourage ($t(79) = -2.496, p <$

.05). The mean for male program director scores (Model: $M = 43.32$, $SD = 11.9$; Inspire: $M = 41.75$, $SD = 12.9$; Challenge: $M = 39.05$, $SD = 13.7$; Enable: $M = 43.36$, $SD = 11.9$; Encourage: $M = 39.98$, $SD = 14.5$) was significantly lower than the mean of female program director scores (Model: $M = 51.10$, $SD = 6.4$; Inspire: $M = 50.27$, $SD = 7.6$; Challenge: $M = 47.51$, $SD = 8.9$; Enable: $M = 50.89$, $SD = 9.9$; Encourage: $M = 47.6$, $SD = 10.6$) as perceived by athletic training students.

This study revealed male and female athletic training program directors do portray significant differences in leadership practices as perceived by their athletic training students, so the null hypothesis is rejected. It is interesting to note this finding parallels the data from Table 3. Leadership practice “Enable” and “Model” were the top two most frequently reported used leadership practice overall while “Encourage” was the least frequently used as reported by athletic training students. The results from this study confirm significant differences between male and female program director leadership practices. The various viewpoints of athletic training students regarding leadership practices and program director gender warrants consideration.

Research Question 4a

To what extent do male and female program directors self-report portraying different leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable)? The null hypothesis for this study stated that male and female athletic training program directors will not self-report differences in leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable). A total of 5 athletic training program directors completed the LPI-Self survey; 3 males and 2 females. Table 14 below describes an overview of program director viewpoints compared to the athletic training student reported scores.

Table 14

Descriptive Statistics for Leadership Practice Scores Perceived by Program Directors (PD) and Athletic Training Students (ATS) by Gender

Leadership Practice by gender	PD Reported Mean	SD	ATS Reported Mean	SD
Model				
Male	54	3.00	43.3	11.96
Female	45	1.41	51.1	6.46
Inspire				
Male	46	8.71	41.7	12.99
Female	49.5	9.19	50.2	7.67
Challenge				
Male	45	6.24	39	13.76
Female	50.5	4.94	47.5	8.90
Enable				
Male	53.3	2.51	43.3	11.90
Female	52.5	2.12	50.8	9.98
Encourage				
Male	44.6	3.05	39.9	14.59
Female	49	8.48	47.6	10.61

Descriptive statistics for each leadership practice were generated in order to compare the means between the two variables, male program directors and female program directors. Mean scores (M) and standard deviations (SD) were provided in Table 14. The researcher also cannot dismiss the variances among program director gender and self-reported leadership practice frequency scores when compared to athletic training student reported leadership scores. Male program directors self-reported the highest leadership practice scores among “Model” ($M = 54$, $SD = 3.00$) than female program directors among “Model” ($M = 45$, $SD = 1.41$). Male program directors also self-reported higher “Enable” scores ($M = 53.3$, $SD = 2.51$) than female program directors ($M = 52.5$, $SD = 2.12$). Compared to athletic training student reported scores, female program directors were scored higher for each leadership practice, including “Model” ($M = 51.1$, $SD = 6.46$) and “Enable” ($M = 50.8$, $SD = 9.98$). The results of the various perceptions of

leadership practices “Model” and “Enable” between program directors and athletic training students strengthened the researcher’s belief that “Model the Way” and “Enable Others to Act” are important variables for the success of an athletic training program.

An independent-samples *t* test was conducted to compare the means between male and female program director self-reported leadership practice frequency scores.

Table 15

Independent-Samples t Test for Program Director Self-Reported Leadership Practices by Gender

Leadership Practice by Gender	n	Mean Difference	Std. Deviation	t	Degree of Freedom	Sig. (2-tailed)
Model						
Male	3	9.000	3.000	3.818	3	.032*
Female	2	9.000	1.414	3.818	3	.032*
Inspire						
Male	3	-3.500	8.718	-.432	3	.695
Female	2	-3.500	9.192	-.432	3	.695
Challenge						
Male	3	-5.500	6.245	-1.031	3	.378
Female	2	-5.500	4.950	-1.031	3	.378
Enable						
Male	3	.833	2.517	.382	3	.728
Female	2	.833	2.121	.382	3	.728
Encourage						
Male	3	-4.333	3.055	-.863	3	.451
Female	2	-4.333	8.485	-.863	3	.451

*Note: *p<.05*

An independent-samples *t* test was calculated comparing the mean scores between program directors’ self-reported leadership behaviors and program director gender. A significant difference was found comparing the means of the two groups for the leadership practice Model:

($t(3) = 3.818, p = .032$). For the leadership practice “Model the Way”, the mean male program director self-reported leadership practice scores ($M = 54, SD = 3.00$) was significantly higher than the mean of female program director self-reported leadership practice scores ($M = 45, SD = 1.41$). It is interesting to compare this statistic with the findings from Table 14; athletic training students perceived female program directors utilizing leadership practices (including “Model the Way”) more often than male program directors. The null hypothesis for this study was rejected. These findings provided the answer to the second half of this research question; the statistical analysis indicated male program directors self-reported utilizing the leadership practice “Model” significantly more frequently than female program directors. Specific behaviors associated with “Model the Way” are listed in Table 1.

The data from Table 15 also revealed no significant difference was found for leadership practices Inspire ($t(3) = .474, p = .636$); Challenge ($t(3) = .880, p = .381$); Enable ($t(3) = 1.310, p = .194$); and Encourage ($t(3) = .589, p = .557$). The mean of male program director scores (Inspire: $M = 46, SD = 8.71$; Challenge: $M = 45, SD = 6.24$; Enable: $M = 53.3, SD = 2.51$; Encourage: $M = 44.6, SD = 3.05$) was not significantly different from the mean of female program director scores (Inspire: $M = 49, SD = 9.19$; Challenge: $M = 50, SD = 4.94$; Enable: $M = 52.5, SD = 2.12$; Encourage: $M = 49, SD = 8.48$) as self-reported by athletic training program directors.

Research Question 5

To what extent do determinants support or hinder institutional BOC exam passing rates? Determinants considered were athletic training students’ grade point average (GPA), size of institution (NCAA Division I, II, or III), and program director highest degree earned (Master’s degree or Doctoral degree). The null hypothesis for this study stated determinants are not a

significant factor for institutional BOC exam pass rates. The LPI-360 Observer survey was completed by athletic training students who participated in this study. Open-ended questions were presented at the end of all surveys to gain additional information from athletic training students regarding their GPA and institution size. Due to this study's small sample size, other determinants, such as SAT scores or BOC examination preparation course, were not considered. Table 16 below outlines the number of athletic training students from each institution who participated in the study.

Table 16

Descriptive Statistics for Athletic Training Student Leadership Practice Inventory Scores and National Collegiate Athletic Association (NCAA) University Division

Leadership Practice	University Division	<i>n</i>	Mean	Std. Deviation
Model the Way	NCAA-I	22	52.2	5.99
	NCAA-II	33	39.6	11.8
	NCAA-III	26	49.2	8.67
Inspire a Shared Vision	NCAA-I	22	52.5	6.55
	NCAA-II	33	38.1	12.74
	NCAA-III	26	46.9	10.20
Challenge the Process	NCAA-I	22	48.5	8.95
	NCAA-II	33	34.9	12.67
	NCAA-III	26	45.7	11.74
Enable Others to Act	NCAA-I	22	51.3	11.01
	NCAA-II	33	41.6	11.92
	NCAA-III	26	47.2	10.37
Encourage the Heart	NCAA-I	22	49.5	11.11
	NCAA-II	33	37.2	13.99
	NCAA-III	26	44.2	12.95

When comparing mean scores, it is apparent that athletic training students from NCAA Division-I institutions within this study reported much higher frequency scores for their program director in each leadership practice category: model ($M= 52.2$, $SD= 5.9$), inspire ($M= 52.5$, $SD= 6.5$), challenge ($M= 48.5$, $SD= 8.9$), enable ($M= 51.3$, $SD= 11$), and encourage ($M= 49.5$, $SD= 11.1$) compared to student scores from NCAA Division-II and NCA Division-III institutions. Program director leadership practice frequency scores reported by athletic training students from NCAA Division-II institutions were the lowest reported scores in each leadership practice category: model ($M= 39.6$, $SD= 11.8$), inspire ($M= 38.1$, $SD= 12.74$), challenge ($M= 34.9$, $SD=$

12.67), enable ($M= 41.6, SD= 11.9$), and encourage ($M= 37.2, SD= 13.9$) when compared to NCAA Division-I institutions and Division-III institutions. Athletic training student reported program director leadership practice scores from NCAA Division-III institutions were moderately ranked in each leadership practice category: model ($M= 49.2, SD= 8.6$), inspire ($M= 46.9, SD= 10.20$), challenge ($M= 45.7, SD= 11.7$), enable ($M= 47.2, SD= 10.3$), and encourage ($M= 44.2, SD= 12.9$) compared to NCAA Division-I and NCAA Division-II institutions. The specific leadership behaviors associated with these practices is outlined in Table 1.

A Pearson Correlation coefficient was computed among athletic training student GPAs and overall program BOC exam pass rates for the 2014-2015 testing period as well as the 3-year BOC exam pass rate aggregate. The results displayed in Table 17 below suggest that significant correlations could not be made for overall program BOC exam pass rates.

Table 17

Pearson Correlation between Athletic Training Programs' BOC Pass Rates and Athletic Training Student (ATS) GPA Scores

Variable	2014-2015 PR	3-Year Aggregate PR	ATS GPA
2014-2015 PR	1.00		
3-Year Aggregate PR	.884*	1.00	
ATS GPA	-.159	-.112	1.00

* $p < .01$

Table 17 describes the results from this analysis. A Pearson correlation coefficient was calculated to determine the degree of influence between BOC exam overall program pass rates and GPAs. The data collected resulted in nonsignificant results; however, a reliable relationship

was noted between the BOC exam pass rates for the 2014-2015 testing period and the 3 year BOC exam pass rate aggregate ($r(84) = .884, p < .01$). This finding indicates a significant influence exists between the variables. This confirms athletic training programs that demonstrate annual success with BOC examination results will have satisfactory 3-year BOC aggregate exam scores. Maintaining a 70% or higher 3-year aggregate BOC examination score will allow athletic training programs to maintain accreditation compliance.

A negative correlation was not significantly demonstrated between student GPAs, the 2014-2015 BOC exam program pass rate ($r(77) = -.159, p > .05$), and the 3 year BOC exam program pass rate aggregate ($r(77) = -.112, p > .05$). The null hypothesis could not yet be accepted or rejected until other determinants were investigated.

An analysis of variance (ANOVA) was used to determine the proportion of variability attributed to each component. Leadership practice scores among athletic training students' perspectives were compared to program BOC exam pass rates for the 2014-2015 testing term as well as the 3-year aggregate BOC exam scores. Table 18 presents the test of homogeneity of variances when the sample is grouped by NCAA division size. For the athletic training student reported leadership practices "Model" and "Inspire", the significance of the Levene statistic was less than .05. Therefore, the variance differences between institution sizes were significant and the null hypothesis was rejected. Since all leadership practice scores satisfied the homogeneity of variance assumption, further evaluation using ANOVA techniques was warranted.

Table 18

Test of Homogeneity of Variance of Athletic Training Student Leadership Practice Scores When Grouped by Institution Size

Leadership Practice	Levene Statistic	<i>df1</i>	<i>df2</i>	Sig.
Model	5.365	2	78	.007
Inspire	4.870	2	78	.010
Challenge	1.810	2	78	.171
Enable	1.068	2	78	.349
Encourage	1.381	2	78	.257

Leadership practices “Model” and “Inspire” revealed unequal variances within the homogeneity of variance analysis. Table 19 below displays results from the Welch and Brown-Forsythe analysis for the robust tests of equality of means.

Table 19

Robust Tests of Equality of Means of Athletic Training Student Leadership Practice Scores When Grouped by Institution Size

Leadership Practice	Statistic	<i>df1</i>	<i>df2</i>	Sig.
Model				
Welch Statistic	13.261	2	51.671	.000
Brown-Forsythe Statistic	15.209	2	72.824	.000
Inspire				
Welch Statistic	15.061	2	51.342	.000
Brown-Forsythe Statistic	14.620	2	73.318	.000
Challenge				
Welch Statistic	11.325	2	51.130	.000
Brown-Forsythe Statistic	11.894	2	76.746	.000
Enable				
Welch Statistic	4.845	2	49.508	.000
Brown-Forsythe Statistic	5.248	2	74.787	.000
Encourage				
Welch Statistic	6.492	2	50.615	.000
Brown-Forsythe Statistic	6.482	2	77.227	.000

Table 20 displays an analysis of variance (ANOVA) to compare athletic training program BOC exam pass rates for the 2014-2015 testing term and the BOC exam pass rate over the 3-year aggregate to athletic training student perceptions of their program director leadership practice frequency scores grouped by institution size.

Table 20

Analysis of Variance (ANOVA) Between Athletic Training Student-Reported Leadership Practice Inventory Scores and Program Board of Certification (BOC) Exam Pass Rates by Institutional Size

Leadership Practice	<i>df</i>	<i>F</i>	Sig.
Model			
Between Groups	2	13.346*	.000
Within Groups	78		
Total	80		
Inspire			
Between Groups	2	12.989*	.000
Within Groups	78		
Total	80		
Challenge			
Between Groups	2	11.165*	.000
Within Groups	78		
Total	80		
Enable			
Between Groups	2	5.138*	.008
Within Groups	78		
Total	80		
Encourage			
Between Groups	2	6.195*	.003
Within Groups	78		
Total	80		

Note. N= 81.

* $p < .05$.

Table 20 shows the results based on Analysis of Variance (ANOVA) between athletic training student-reported leadership practice frequency use by their program director and athletic training program institution size, defined by NCAA Division-I, II, and III. The results suggest that institution size is significantly associated with athletic training student perceptions of their program director leadership practice frequency use for: model ($F(2, 78) = 13.34, p < .05$), inspire ($F(2, 78) = 12.98, p < .05$), challenge ($F(2, 78) = 11.16, p < .05$), enable ($F(2, 78) = 5.13, p <$

.05), and encourage ($F(2, 78) = 6.19, p < .05$). Each leadership practice (model, inspire, challenge, enable, and encourage) was statistically significant between institution division and athletic training student perceptions of their program directors' leadership practice use. According to this statistic, the null hypothesis is rejected since significant associations exist between BOC exam pass rates and institution size.

Due to statistically significant results in this investigation, a post-hoc analysis using the Bonferroni method was computed on the ANOVA to make multiple comparisons between institutional sizes. Table 21 below displays the results of the post hoc Bonferroni analysis at the .05 experiment-wise level. The results indicated significant mean differences for eight of the comparisons. Athletic training student mean scores for leadership practice "Model" were significantly higher in Division-I ($M= 52.2, SD= 5.9$) and in Division-III institutions ($M= 49.1, SD= 8.6$) than Division-II institutions ($M= 39.6, SD= 11.8$). Athletic training student mean scores for leadership practice "Inspire" were significantly higher in Division-I ($M= 52.4, SD= 6.5$) and in Division-III institutions ($M= 46.8, SD= 10.2$) than Division-II institutions ($M= 38, SD= 12.7$). Athletic training student mean scores for leadership practice "Challenge" were significantly higher in Division-I ($M= 48.5, SD= 8.9$) and in Division-III institutions ($M= 45.6, SD= 11.7$) than Division-II institutions ($M= 34.9, SD= 12.6$). Athletic training student mean scores for leadership practice "Enable" were significantly higher in Division-I institutions ($M= 51.3, SD= 11$) than Division-II institutions ($M= 41.6, SD= 11.9$). Athletic training student mean scores for leadership practice "Encourage" were significantly higher in Division-I institutions ($M= 49.4, SD= 11.1$) than Division-II institutions ($M= 37.1, SD= 13.9$).

Table 21

Multiple Comparisons of Athletic Training Student Leadership Practice Inventory Scores and National Collegiate Athletic Association (NCAA) University Division

Dependent Variable		Mean Difference	SE	Sig.
Model				
NCAA D-I	NCAA D-II	12.59091*	2.63539	.000
	NCAA D-III	3.07343	2.77367	.814
NCAA D-II	NCAA D-I	-12.5909*	2.63539	.000
	NCAA D-III	-9.5178*	2.51082	.001
NCAA D-III	NCAA D-I	3.07343	2.77367	.814
	NCAA D-II	9.5178*	2.51082	.001
Inspire				
NCAA D-I	NCAA D-II	14.39394*	2.90854	.000
	NCAA D-III	5.56993	3.06115	.218
NCAA D-II	NCAA D-I	-14.39394*	2.90854	.000
	NCAA D-III	-8.82401*	2.77105	.006
NCAA D-III	NCAA D-I	-5.56993	3.06115	.218
	NCAA D-II	8.82401*	2.77105	.006
Challenge				
NCAA D-I	NCAA D-II	13.60606*	3.15903	.000
	NCAA D-III	2.85315	3.32478	1.000
NCAA D-II	NCAA D-I	-13.60606*	3.15903	.000
	NCAA D-III	-10.7529*	3.00970	.002
NCAA D-III	NCAA D-I	-2.85315	3.32478	1.000
	NCAA D-II	10.75291*	3.00970	.002
Enable				
NCAA D-I	NCAA D-II	9.68182*	3.08344	.007
	NCAA D-III	4.08741	3.24523	.635
NCAA D-II	NCAA D-I	-9.68182*	3.08344	.007
	NCAA D-III	-5.59441	2.93768	.182
NCAA D-III	NCAA D-I	-4.08741	3.24523	.635
	NCAA D-II	5.59441	2.93768	.182

Encourage					
NCAA D-I	NCAA D-II	12.30303*		3.56141	.003
	NCAA D-III	5.30070		3.74828	.484
NCAA D-II	NCAA D-I	-12.30303		3.56141	.003
	NCAA D-III	-7.00233		3.39306	.127
NCAA D-III	NCAA D-I	-5.30070		3.74828	.484
	NCAA D-II	7.00233		3.39306	.127

*Experiment-wise $p < .05$.

Taken together, these results suggest that athletic training student perceptions of their program director's leadership practice frequency use was significantly higher in the NCAA Division-I institution and significantly lower in the NCAA Division-II institution, even though Division-I and Division-III institutions are comparable.

Summary of Results

This chapter exclusively analyzed and presented data without drawing specific conclusions or interpretations. In this study, five accredited undergraduate athletic training education programs participated in the research. A total of 86 participants completed the Leadership Practices Inventory-360 (LPI-360) online survey. To answer the research questions, data was gathered from five athletic training program directors and athletic training students within their respective program. Descriptive and inferential statistics were used to examine each research question in detail which included t -tests, regressions, and correlations.

Details of Analysis and Results

The researcher used descriptive statistics and t -test to answer the first research question and analyze data regarding differences between program director self-reports and athletic training student perceptions of program director leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable). The researcher's analysis resulted in 10 recognizable

leadership practices with specific leadership behaviors that study participants identified were the most frequently used among athletic training program directors. The leadership behaviors were ranked from most frequent use to less frequent use, based on the average scores reported by the program director and athletic training student responses. Mean scores from program director and athletic training student viewpoints revealed leadership practices “Enable Others to Act” and “Model the Way” was most frequently utilized by athletic training program directors. Specific leadership behaviors associated with “Enable” was: treats others with dignity and respect. The second most frequently reported leadership behavior associated with “Model” was: sets a personal example of what he/she expects of others. These results suggest both program directors and athletic training students believe “Enable” and “Model” are most frequently used leadership practices among program directors. A *t*-test also established program directors self-reported significantly higher frequency use of the leadership practice “Enable Others to Act”. These results parallel the descriptive stats theme that program directors self-report utilizing the leadership practice “Enable Others to Act” more often than other leadership practices.

Descriptive statistics were also used to explore the potential differences in leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable) between program director gender; from both the athletic training student and program director perspective. The study found athletic training students scored female program directors higher than male program directors in each leadership practice. This indicates athletic training students view female program directors utilizing the leadership practices more often than male program directors. From the program directors’ viewpoints, male program directors self-reported higher frequency of use for “Model the Way” and “Enable Others to Act”. A *t*-test revealed a significant difference between male program directors and female program directors self-

reported scores. Male program directors self-reported the use of leadership practice “Model the Way” more often than female program directors.

A Pearson Correlation was used to answer research questions surrounding potential influences between leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable) and athletic training program BOC exam pass rates. Program pass rates on the BOC examination were analyzed from the 2014-2015 testing period as well as a 3-year aggregate score. The findings suggest overall program BOC exam pass rates were satisfactory when athletic training students perceived their program director portraying all 5 leadership practices. The study found that the more athletic training students perceived their program director utilizing the leadership practice “Model the Way” and “Challenge the Process”, the more likely the pass rates were satisfactory; pass rates that were above the 70% accreditation standard. There were no significant influences between program director self-reported leadership scores and program BOC exam pass rates.

A Pearson correlation coefficient was calculated to determine the degree of influence between BOC exam overall program pass rates and determinants that support or hinder a student's BOC exam pass rate, such as grade point average (GPA) score. The data collected resulted in nonsignificant results; GPA does not influence program pass rates on the BOC exam. An Analysis of Variance was also used to generate potential influences between institution size and program BOC pass rates. The data showed a significant association between all 5 leadership practices and institution size. Athletic training students from Division-I institutions reported higher leadership practice frequency scores for their program director than Division-II and Division-III institutions. Athletic training students from Division-II institutions reported lower leadership practice frequency scores for their program director than Division-I and Division-III

institutions. Students from both Division-I and Division-III institutions reported higher leadership practice frequency use among “Model”, “Inspire”, and “Challenge” than Division-II instructions.

A regression analysis was used to answer research questions surrounding predictive factors between leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable) and athletic training program BOC exam pass rates. From athletic training students’ perspectives, program directors who were viewed as frequently using the leadership practice “Model the Way” had satisfactory program pass rates on the BOC exam for the 2014-2015 testing term as well as 3-year aggregate scores. “Model the Way” was found to be a predictor and positive influence on athletic training student BOC exam scores.

Conclusion

This study investigated the potential relationships and influences between athletic training program directors’ self-reported leadership behaviors and athletic training students’ perceptions of such behavior. This chapter described the results and data analysis used within this study. The following chapter will discuss the implications of the results, conclusions from the study, and suggestions for future research and athletic training practice.

CHAPTER 5

DISCUSSION

The purpose of this study was to explore the relationships between athletic training students' perceptions of their program director's leadership behaviors and athletic training program pass rates on the national board of certification examination. For the purposes of this study, leadership behaviors were defined by Kouzes' and Posner's (2012) Five Practices of Exemplary Leadership: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. Program pass rates were collected for the 2014-2015 testing period as well as a 3-year aggregate score. Pass rates were deemed satisfactory if the program achieved national accreditation standards from the Commission on Accreditation of Athletic Training Education (CAATE) of 70% or higher over a 3-year period. It is important for athletic training education programs to maintain compliance with accreditation standards in order to prevent the program from a probation status. It is the responsibility of the undergraduate athletic training program director to maintain accreditation compliance as well as every other aspect of the athletic training curriculum including didactic and clinical aspects of the students' education (CAATE, 2012). This study also investigated if certain independent variables such as GPA or size of the students' institution (categorized by NCAA Division-I, II, and III ranks) supported athletic training student performance on the national board of certification examination.

Leadership is vital to the roles and responsibilities of the athletic training education program director and for student success, so it is important to understand their leadership practices from the viewpoints of their athletic training students. Program directors portray effective leadership when they influence others within the education program as part of their

daily job responsibilities (Laurent & Bradney, 2007; Kutz, 2012b; Odia, 2012). For this reason, the Leadership Practice Inventory-360 (LPI-360) survey was chosen for this study (Kouzes & Posner, 2013c). This survey has been utilized on over 300,000 leaders and is deemed appropriate for any leader within various leadership positions (Kouzes & Posner, 2002). The LPI-360 measures frequency of leadership practice use from the leader's perspective (the athletic training program director) by completing the LPI-360 Self survey and also from the observer's perspective (the athletic training student) by completing the LPI-360 Observer survey (Kouzes & Posner, 2002). This leadership assessment tool was also chosen due to its ability to measure specific leadership behaviors (e.g., Model the Way: Sets a personal example of what he/she expects of others), the leadership practices within the LPI-360 survey describe components of transformational leadership theory, and the LPI-360 has established normative data which can be used as comparisons for athletic training program directors and those leaders within other fields (Kouzes & Posner, 2002; Laurent & Bradney, 2007).

This study primarily used theoretical frameworks surrounding transformational leadership and Kouzes' and Posner's (2012) exemplary leadership framework. Chapter 2 discussed the relevant literature on leadership in athletic training and the implications of the athletic training program director. Chapter 2 also described a history of athletic training education and the effects of current reforms. Chapter 3 outlined a detailed explanation of the methods and data collection used for this study. Chapter 4 revealed results of the data analysis in relation to the five research questions. The outputs included *t*-tests, regression models, Pearson Correlations, and Analysis of Variance. This chapter provides a summary of the results, a discussion of the key findings in relation to the research questions, overall conclusions and

implications of results, and recommendations for future leadership research within athletic training education.

Summary of the Results

This study consisted of five research questions surrounding athletic training student perceptions of their program director's leadership behaviors defined by Kouzes' and Posner's (2012) the Five Practices: model, inspire, challenge, enable, and encourage. All quantitative data was collected over two semesters, fall and spring, within the same school year from five institutions. Five athletic training program directors and their respective athletic training students participated in the study. The instrument used was the LPI-360 survey (Kouzes & Posner, 2013c). To protect the identity of the participants, data were reported collectively.

Research Question 1

Are there differences between Program Director self-reported leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) and students' perceptions of program director leadership behaviors? The demographic data from athletic training student and program director reports show the leadership practice "Enable" is most frequently used by athletic training program directors followed by the leadership practice "Model". Overall, the findings revealed that programs directors self-report higher frequency scores for each leadership practice (model, inspire, challenge, enable, and encourage). Athletic training students did not view their program director portraying leadership practices as often as self-reports indicate. The athletic training student responses had more widespread deviation from the mean scores when compared to the program director responses. The program directors within this sample were fairly consistent with their self-reported scores for model (M= 50.4, SD= 5.4), inspire (M= 47.4, SD= 7.9), challenge (M= 47.2, SD= 5.8), enable (M= 53, SD= 2.1), and encourage (M= 46.4,

SD= 5.3). Student responses varied high and low on the frequency response scale for model (M= 46, SD= 10.9), inspire (M= 44.8, SD= 12), challenge (M= 42, SD= 12.8), enable (M= 46, SD= 11.7), and encourage (M= 42.7, SD= 13.7). The specific leadership behaviors associated with these practices is outlined in Table 1.

When reviewing the results from the LPI-360 survey, there is no magic number or perfect score to indicate a good or better leader. The LPI-360 is a leadership development tool consisting of the LPI-Self survey, which was completed by the program director, and the LPI-Observer survey, which was completed by the athletic training student (Kouzes & Posner, 2002). The LPI measured the reported frequency use of The Five Practices: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart, from each participant (Kouzes & Posner, 2002). The LPI scores range from 6 to 60 representing the frequency of use; more or less. A lower score represents a less frequent use of the leadership practice and a higher score indicates more frequent use of the leadership practice.

Frequently practicing more than one leadership behavior will result in better organizational effectiveness (Kouzes & Posner, 2016). Research (McNeese-Smith, 1993; McNeese-Smith, 1995; Cardin, 1995; Loke, 2001; Clavelle et al., 2012) among other allied health care fields has found similar results with the Five Practices (Kouzes & Posner, 2012) and organizational efficiency. These organizations have found increased commitment and satisfaction of hospital employees, increased satisfaction, commitment, and retention of nurses, increased patient care, and more effective public health leaders (McNeese-Smith, 1993; McNeese-Smith, 1995; Cardin, 1995; Loke, 2001; Kouzes & Posner, 2002). Nursing staff perceptions of their manager's frequency of leadership practice use greatly affected their engagement within the organization; high leadership practice scores reported from nurses

positively influenced job satisfaction, productivity, and organizational commitment (McNeese-Smith, 1995). A similar study by Cardin (1995) revealed higher LPI-Observer scores significantly influenced retention of nurses within the department and quality of health care provided to patients. As chief nursing officers gained more experience and education, they portrayed more transformational leadership qualities (Clavelle et al., 2012).

Other studies (Odai, 2012; Yates, 2013; Eifel, 2014; Kokx, 2016) among other allied health care fields did not utilize the LPI-360, investigated program director leadership, and found similar results. Positive leadership and leadership skills were ranked by participants as important for the paramedic education program director role (Kokx, 2016). During the emergency medical system education program, the program directors' leadership was accountable for 75% of program success (Kokx, 2016). Physician assistant and athletic training program directors frequently use transformational leadership as part of their daily responsibilities that advances overall performance within the department (Odai, 2012; Yates, 2013; Eifel, 2014).

The average leadership practice score from this study, listed above, fall within normative averages established through the LPI mean-score database generated by extensive research from the creators, Kouzes and Posner (2002). The LPI research has indicated leadership practices "Enable" and "Model" are the 2 most frequently used practices among leaders (Kouzes & Posner, 2002). Athletic training program directors are frequently using leadership practices similar to other various leaders who have utilized the LPI. These results are also consistent with Laurent's and Bradney's study (2007) which found athletic training leaders self-reported higher LPI scores on leadership practices "Model" and "Enable". Kouzes and Posner (2002) confirmed it is normal to find self-reported scores higher than observer-reported scores in certain settings

and some researchers have even reported no significant differences between self and observer reports.

Research Question 2

Are there relationships between students' perceived Program Director leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination? The LPI-Observer survey was completed by athletic training students to gain their perspectives. A Pearson Correlation coefficient was computed among athletic training students' perceptions of their program directors' 5 leadership practices (model, inspire, challenge, enable, and encourage) and overall program BOC exam pass rates for the 2014-2015 testing year as well as a 3-year pass rate aggregate. A moderate positive correlation was indicated for 2014-2015 pass rate testing term among: Model ($r(79) = .401, p < .05$), Inspire ($r(79) = .388, p < .01$), Challenge ($r(79) = .375, p < .01$), Enable ($r(79) = .339, p < .01$), and Encourage ($r(79) = .306, p < .01$). A moderate positive correlation was indicated for the 3-year aggregate testing term among: Model ($r(79) = .415, p < .05$), Inspire ($r(79) = .377, p < .01$), Challenge ($r(79) = .392, p < .01$), Enable ($r(79) = .303, p < .01$), and Encourage ($r(79) = .277, p < .05$). These correlations indicate a significant influence exists between the independent variables (2014-2015 pass rate, 3-year aggregate pass rate, and student perceived leadership practice scores). Due to this study's small sample size, this finding cannot be generalized to all undergraduate athletic training program directors.

This finding suggests overall program BOC examination pass rates were satisfactory when athletic training students perceived their program director portraying all five leadership practices. There is not a single trait that will significantly determine an athletic training program's board of certification examination pass rate. It is the utilization of all five leadership

practices combined that makes a program successful. Kouzes' and Posner's (2013) research established that all five leadership practices have a positive "impact on leadership effectiveness" (Kouzes & Posner, 2013c). By the author's (2013c) definition, leadership is not just one behavior but a combination of leadership behaviors and is portrayed effectively by practicing more than one leadership practice (Kouzes & Posner, 2013c). Previous studies have investigated athletic training student perceptions in the clinical setting and determined the importance of multiple leadership behaviors from the clinical preceptor (Curtis, Helion, & Domsohon, 1998; Laurent & Weidnert, 2001; Levey et al., 2009; Bowman, Dodge, & Mazerolle, 2015). Athletic trainers who served as mentors for athletic training students portrayed behaviors that directly affected the students' feelings and attitudes throughout the education program (Curtis, Helion, & Domsohon, 1998; Laurent & Weidnert, 2001; Levey et al., 2009; Bowman, Dodge, & Mazerolle, 2015). Athletic training students who had positive experiences within the athletic training education program had preceptors who utilized a combination of mentoring, acceptance, nurturing, and modeling behaviors towards their students (Curtis, Helion, & Domsohon, 1998; Laurent & Weidnert, 2001; Levey et al., 2009; Bowman, Dodge, & Mazerolle, 2015). All the behaviors measured by the LPI have an impact on leadership effectiveness which creates significant outcomes in students' level of engagement, commitment, and performance (Kouzes & Posner, 2016). Demonstrating more of each leadership practice correlates with better results; therefore, leadership is more than one practice or behavior (Kouzes & Posner, 2012). To use an analogy from *The Leadership Challenge* (2012), leadership could be viewed as a pentathlon (Kouzes & Posner, 2012). There are five events in a pentathlon and the participant cannot compete if they do not ultimately learn to perform the skills in each event. Similarly, there are

five leadership practices which require a mastery of skills in each practice in order for leaders to perform at their best (Kouzes & Posner, 2012).

Research Question 2a

Are there relationships between Program Directors' self-reported leadership behaviors (model, inspire, challenge, enable, and encourage) and institutional passing rates on the national athletic training BOC examination? A Pearson Correlation Coefficient was computed among athletic training program director self-reported perceptions of their five leadership practices (model, inspire, challenge, enable, and encourage) and overall program BOC pass rates for the 2014-2015 testing period as well as a 3-year pass rate aggregate. A significant negative correlation was demonstrated between the leadership practice "Model" and BOC exam pass rate from the 2014-2015 testing term ($r(3) = -.946, p < .05$). The data suggest that the higher the program director self-rated as "Modeling the Way", the lower the annual pass rates would be reported for that specific athletic training education program. This correlation is only significant among "Model" and the 2014-2015 pass rate term and not the 3-year aggregate pass rate. Due to this study's small sample size, this finding cannot be generalized to all undergraduate athletic training program directors.

Laurent and Bradney's (2007) study revealed athletic training program directors self-reported higher leadership practice scores in "Model" and "Enable" over professionals who were in positions of head athletic trainers. The environment where a leader operates may influence the frequency of their demonstrated leadership practice (Laurent & Bradney, 2007; Meyer, 2012; Odai, 2012). The athletic training program director is responsible for the professional development of students and can influence others when they change and grow the education program. Specific academic responsibilities may explain why program directors view

themselves as portraying one leadership practice more frequently over another and may explain the different motivators for utilizing specific leadership practices more often than others (Laurent & Bradney, 2007; Meyer, 2012). Leadership practices that are used more often or less often do make a difference. Kouzes and Posner (2016) confirm the outcome may be positive or negative, but how a leader is perceived by others will effect one's commitment to an organization, their willingness to put forth effort, and their initiative to uphold personal responsibility.

Understanding student perspectives may help explain results from this research question; program directors who self-reported leadership practices higher than their athletic training students may not have committed and motivated students. Thus, these students are not performing as well on the national BOC examination.

Another interesting result from this data illustrated a significant positive correlation between the 3-year aggregate pass rate scores and the 2014-2015 pass rate scores ($r(3) = .905, p < .05$). An increased 3-year aggregate pass rate score will determine increased annual pass rate scores. These results confirm programs that annually possess higher pass rate scores will then inevitably possess satisfactory 3-year aggregate scores and maintain accreditation compliance. It can be expected that in order to maintain accreditation standards, athletic training programs must achieve high first attempt passing rates annually on the BOC examination.

Research Question 3

Do specific Program Director leadership behaviors (The Five Practices: model, inspire, challenge, enable, and encourage) predict institutional first-attempt passing rates on the national athletic training BOC examination? In order to collect the necessary data, program directors completed the LPI-Self survey and the athletic training students completed the LPI-Observer survey. Differences between program director self-report and student reports were observable.

As previously described in Table 4, athletic training students within each program reported lower perceived leadership practice frequency scores when compared to their program director for each leadership practice category (model, inspire, challenge, enable, and encourage). Program directors that self-reported higher leadership practice scores, when compared to their student perception scores, were a part of programs with below standard pass rates. These results again relate to Kouzes' and Posner's (2016) work regarding observer perception and level of engagement. Those who view their leader as frequently demonstrating the leadership practices (model, inspire, challenge, enable, and encourage) will have increased self-motivation, high levels of commitment to the organization, and will put forth effort (Kouzes & Posner, 2016). Level of engagement is directly related to how the leader behaves within an organization (Kouzes & Posner, 2016). Understanding student perspectives may explain the results of this research question; athletic training students, who scored their program director lower on the LPI survey, may have lower-levels of commitment or motivation within their education program and may not be performing well on the BOC examination. Another study (Meyer, 2012) found similar results when investigating athletic training program director leadership and student success. Meyer (2012) reported athletic training students who were exposed to transformational leadership behaviors were a significant predictor of student competence.

Stepwise linear regression analyses were conducted to determine any significant leadership practices that were predictive of program pass rates. The analyses predicted athletic training programs' BOC examination pass rate during the 2014-2015 testing period based on athletic training student perceived leadership behaviors of their program director. A stepwise linear regression model was able to predict 15% of the variance in first time BOC exam pass rates for the 2014-2015 testing period. The variable "Model the Way" ($\beta = .410$) predicts 15% of the

dependent variable first attempt pass rate. This variable has a positive β which indicates the more the athletic training student perceived their program director utilizing the leadership practice “Model the Way”, the higher the pass rate will be for that particular athletic training education program. When athletic training students perceived their program director utilizing the leadership practice “Model”, they were 15% more likely to pass the BOC exam on the first attempt. All 5 leadership practices (model, inspire, challenge, enable, and encourage) correlate with each other; however, the leadership practice “Model the Way” was found most predictive of program first attempt pass rate success on the BOC examination. A stepwise linear regression model was also able to predict 16% of the variance in first time BOC examination pass rates for the 3-year aggregate BOC examination testing period. The variable “Model the Way” ($\beta = .415$) predicts 16% of the dependent variable first attempt pass rate. This variable has a positive β which indicates the more the athletic training student perceived their program director utilizing the leadership practice “Model the Way”, the more likely the 3-year BOC examination pass rate aggregate will increase. When athletic training students’ perceived their program director utilizing the leadership practice “Model”, programs were 16% more likely to meet the 3 year BOC examination pass rate aggregate standard of 70% as determined by the CAATE. The results from the regression analysis confirm athletic training students’ perceived the leadership practice “Model the Way” as a predictor and positive influence on annual and 3-year aggregate first attempt BOC examination passing rates. Specific leadership behaviors for “Model” are outlined in Table 1. Program director self-reported scores were not predictive of annual BOC exam pass rates or 3-year BOC examination pass rate aggregate scores.

Leadership practice “Model the Way” has been a significant variable within this research study. Results have shown that “Model the Way” was a positive influencer over athletic

training student performance and also a strong predictor of athletic training student BOC examination scores. Specific leadership behaviors associated with “Model the Way” are “clarify values by finding your voice and affirming shared values” and “set the example by aligning actions with shared values” (Kouzes & Posner, 2012, p. 29). “Model the Way” describes leaders who are willing to stand up for their beliefs, speak not only for themselves, but for their organizations, and they appreciate shared values with other members of their organization (Kouzes & Posner, 2012). A leader who demonstrates “Model the Way” is not only talking about what they want, but they are physically doing what they say they will do. Utilizing leadership practice “Model the Way” demonstrates the leader is credible which will naturally establish trust between leader and constituents (Kouzes & Posner, 2012). One can understand why “Model” is a strong predictor of student academic performance. As discussed earlier, leaders who are scored higher on the LPI survey will have higher engagement and commitment from others. Athletic training students have high aspirations of becoming a health care professional and are looking up to their program director for guidance, advice, and as a positive role model within the athletic training profession.

Research Question 4

To what extent do male and female program directors portray different leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable) as perceived by undergraduate athletic training students? It is interesting to mention the discrepancies between male and female program director scores as perceived by athletic training students. For each leadership practice, female program directors were scored higher than male program directors by athletic training students within their program. As mentioned earlier, the LPI survey measures

frequency of leadership practices. A higher score indicates more frequent use of that particular leadership practice.

The leadership practice “Model” had the highest score for female program directors ($M = 51.1, SD = 6.46$). The leadership practices “Model” ($M = 43.3, SD = 11.90$) and “Enable” ($M = 43.3, SD = 11.90$) had the highest scores for male program directors. The leadership practice “Enable” was second highest for female program directors ($M = 50.8, SD = 9.98$) and “Inspire” for male program directors ($M = 41.7, SD = 12.90$). The least frequently used leadership practice reported by athletic training students was “Challenge” and “Encourage”; however, female program directors still scored higher for “Challenge” ($M = 47.5, SD = 8.90$) and “Encourage” ($M = 47.6, SD = 10.60$) than male program directors for “Challenge” ($M = 39, SD = 13.70$) and “Encourage” ($M = 39.9, SD = 14.50$). Specific leadership behaviors associated with each leadership practices are outlined in Table 1.

This research question revealed average female program director scores were significantly higher (reported more frequently) than male program director scores for all five leadership practices (model, inspire, challenge, enable, and encourage) as perceived by athletic training students. This finding is not supported by the national outcomes from the LPI Data Analysis Report (2010) which claims “demographic variables accounted for no more than one percent of the explained variance in any one of the five leadership practices” (Posner, 2010, p.9). Other research (Laurent & Bradney, 2007; Meyer, 2012; Odai, 2012; Drake, 2014; Bowman, Dodge, & Mazerolle, 2015) surrounding leadership in athletic training has only described self-reports from the program directors and not from student perspectives.

The independent-samples t test revealed statistically significant differences in program director gender and leadership practices. Significant values were found between gender and

leadership practices Model: ($t(79) = -3.240, p < .05$); Inspire ($t(79) = -3.228, p < .05$); Challenge ($t(79) = -2.976, p < .05$); Enable ($t(79) = -2.885, p < .05$); and Encourage ($t(79) = -2.496, p < .05$). The mean for male program director scores (Model: $M = 43.32, SD = 11.9$; Inspire: $M = 41.75, SD = 12.9$; Challenge: $M = 39.05, SD = 13.7$; Enable: $M = 43.36, SD = 11.9$; Encourage: $M = 39.98, SD = 14.5$) was significantly lower than the mean of female program director scores (Model: $M = 51.10, SD = 6.4$; Inspire: $M = 50.27, SD = 7.6$; Challenge: $M = 47.51, SD = 8.9$; Enable: $M = 50.89, SD = 9.9$; Encourage: $M = 47.6, SD = 10.6$) as perceived by athletic training students.

This study revealed male and female athletic training program directors portray significant differences in leadership practices as perceived by their athletic training students. It is interesting to note this finding parallels the data from Table 3. Leadership practice “Enable” and “Model” were the top two most frequently reported used leadership practice overall while “Encourage” was the least frequently used as reported by athletic training students. The results from this study confirm significant differences between male and female program director leadership practices. The various viewpoints of athletic training students regarding leadership practices and program director gender warrants consideration. Possibly due to the study’s small sample size, these findings are not parallel with national averages (Posner, 2010).

Research Question 4a

To what extent do male and female program directors self-report portraying different leadership behaviors (The Five Practices: model, inspire, challenge, encourage, and enable)? The researcher also cannot dismiss the variances among program director gender and self-reported leadership practice frequency scores when compared to athletic training student reported leadership scores from above. Male program directors self-reported the highest

leadership practice scores among “Model” ($M = 54, SD = 3.00$) than female program directors among “Model” ($M = 45, SD = 1.41$). Male program directors also self-reported higher “Enable” scores ($M = 53.3, SD = 2.51$) than female program directors ($M = 52.5, SD = 2.12$). Compared to athletic training student reported scores, female program directors were scored higher for each leadership practice, including “Model” ($M = 51.1, SD = 6.46$) and “Enable” ($M = 50.8, SD = 9.98$).

The results of the various perceptions of leadership practices “Model” and “Enable” between program directors and athletic training students strengthened the researcher’s belief that “Model the Way” and “Enable Others to Act” are important variables for the success of an athletic training program. Leadership practice “Model the Way” has been previously discussed as an essential component for setting an example by leading by example in order to earn constituent trust (Kouzes & Posner, 2012). Leadership behaviors associated with “Enable Others to Act” include actions that “foster collaboration by building trust and facilitating relationships” and “strengthen others by increasing self-determination and developing competence” (Kouzes & Posner, 2012, p. 214). Leaders who exhibit “Enable” qualities understand the importance of mutual respect and work hard to build cohesive, trustworthy relationships within the organization (Kouzes & Posner, 2012). Leaders’ environments in which they operate can also influence their frequency of leadership behaviors (Laurent & Bradney, 2007; Levey et al., 2009; Meyer, 2012; Walters et al., 2015). Athletic training program directors must interact with a variety of university officials from their own athletic training program faculty and staff, to members of the Dean’s office, to the athletic department. Program directors must help maintain positive relationships within these groups, so they may self-report utilizing leadership practice “Enable” more often than other leadership practices.

An independent-samples *t* test was calculated comparing the mean scores between program directors' self-reported leadership behaviors and program director gender. A significant difference was found comparing the means of the two groups for the leadership practice Model: ($t(3) = 3.818, p = .032$). For the leadership practice "Model the Way", the mean male program director self-reported leadership practice scores ($M = 54, SD = 3.00$) was significantly higher than the mean of female program director self-reported leadership practice scores ($M = 45, SD = 1.41$). It is interesting to compare this statistic with the findings from Table 14; athletic training students perceived female program directors utilizing leadership practices (including "Model the Way") more often than male program directors. These findings provided the answer to the second half of this research question; the statistical analysis indicated male program directors self-reported utilizing the leadership practice "Model" significantly more frequently than female program directors. Specific behaviors associated with "Model the Way" are listed in Table 1. Program director self-reported mean scores for leadership practices "Inspire", "Challenge", "Enable", and "Encourage" were not significant.

Although this question revealed male program directors self-report utilizing leadership practice "Model the Way" more often than female program directors, Kouzes' and Posner's (2002) research indicated "leadership practices are not significantly different for males and females on the LPI-Self" (Kouzes & Posner, 2002, p.10). Posner (2010) confirmed differences between gender and leadership practice scores "accounted for no more than one percent of the explained variance in any one of the five leadership practices" (Posner, 2010, p.9). Other studies (Laurent & Bradney, 2007; Eagly & Johnson, 1990; Eagly & Johannesen-Schmidt, 2001) have found conflicting evidence regarding differences in leadership styles, leadership effectiveness, and gender. Yet, other research (Kouzes & Posner, 2010) has reported "similar results in regards

to gender and leadership practices within specific sample populations (Kouzes & Posner, 2010, p. 10). For instance, public health agency directors reported no gender differences while female university professors reported higher LPI scores in “Engaging” more than male counterparts (Kouzes & Posner, 2010). Gender roles may account for the way constituents view their leader, so women may be deemed as an undesirable leader for portraying male-attributed leadership qualities (Eagly & Johannesen-Schmidt, 2001).

Research Question 5

To what extent do determinants support or hinder institutional BOC exam passing rates? Determinants considered were: athletic training students’ grade point average (GPA), size of institution (NCAA Division I, II, or III), and program director highest degree earned (Master’s degree or Doctoral degree).

A Pearson correlation coefficient was calculated to determine the degree of influence between BOC examination overall program pass rates and GPAs. The data collected resulted in nonsignificant results. A similar study (Meyer, 2012) investigated athletic training student performance on the BOC examination discovered students’ SAT score and age were significant predictors of BOC examination passing rates. As SAT scores increased, so did the likelihood of an athletic training student passing the BOC examination on the first attempt (Meyer, 2012). As the students’ age increased, the likelihood of passing the BOC examination on the first attempt decreased (Meyer, 2012).

Although the results from this question were not significant, a reliable relationship was noted between the BOC exam pass rates for the 2014-2015 testing period and the 3 year BOC exam pass rate aggregate ($r(84) = .884, p < .01$). This indicates a significant influence exists between the variables. This confirms athletic training programs that demonstrate annual success

with BOC examination results will have satisfactory 3-year BOC aggregate examination scores. Maintaining a 70% or higher 3-year aggregate BOC examination score will allow athletic training programs to maintain accreditation compliance.

When comparing mean scores, it is apparent that athletic training students from NCAA Division-I institutions within this study reported much higher frequency scores for their program director in each leadership practice category: model ($M= 52.2, SD= 5.9$), inspire ($M= 52.5, SD= 6.5$), challenge ($M= 48.5, SD= 8.9$), enable ($M= 51.3, SD= 11$), and encourage ($M= 49.5, SD= 11.1$) compared to student scores from NCAA Division-II and NCA Division-III institutions. Program director leadership practice frequency scores reported by athletic training students from NCAA Division-II institutions were the lowest reported scores in each leadership practice category: model ($M= 39.6, SD= 11.8$), inspire ($M= 38.1, SD= 12.74$), challenge ($M= 34.9, SD= 12.67$), enable ($M= 41.6, SD= 11.9$), and encourage ($M= 37.2, SD= 13.9$) when compared to NCAA Division-I institutions and Division-III institutions. Athletic training student reported program director leadership practice scores from NCAA Division-III institutions were moderately ranked in each leadership practice category: model ($M= 49.2, SD= 8.6$), inspire ($M= 46.9, SD= 10.20$), challenge ($M= 45.7, SD= 11.7$), enable ($M= 47.2, SD= 10.3$), and encourage ($M= 44.2, SD= 12.9$) compared to NCAA Division-I and NCAA Division-II institutions. The specific leadership behaviors associated with these practices is outlined in Table 1.

Data were analyzed using the Analysis of Variance (ANOVA) between athletic training student-reported leadership practice frequency use by their program director and athletic training program institution size, defined by NCAA Division-I, II, and III. The results suggest that institution size is significantly associated with athletic training student perceptions of their program director leadership practice frequency use for: model ($F(2, 78) = 13.34, p < .05$), inspire

($F(2, 78) = 12.98, p < .05$), challenge ($F(2, 78) = 11.16, p < .05$), enable ($F(2, 78) = 5.13, p < .05$), and encourage ($F(2, 78) = 6.19, p < .05$). Each leadership practice (model, inspire, challenge, enable, and encourage) was statistically significant between institution division and athletic training student perceptions of their program directors' leadership practice use.

Due to statistically significant results in this investigation, a post-hoc analysis using the Bonferroni method was computed on the ANOVA to make multiple comparisons between institutional sizes. Athletic training student mean scores for leadership practice "Model" were significantly higher in Division-I ($M= 52.2, SD= 5.9$) and in Division-III institutions ($M= 49.1, SD= 8.6$) than Division-II institutions ($M= 39.6, SD= 11.8$). Athletic training student mean scores for leadership practice "Inspire" were significantly higher in Division-I ($M= 52.4, SD= 6.5$) and in Division-III institutions ($M= 46.8, SD= 10.2$) than Division-II institutions ($M= 38, SD= 12.7$). Athletic training student mean scores for leadership practice "Challenge" were significantly higher in Division-I ($M= 48.5, SD= 8.9$) and in Division-III institutions ($M= 45.6, SD= 11.7$) than Division-II institutions ($M= 34.9, SD= 12.6$). Athletic training student mean scores for leadership practice "Enable" were significantly higher in Division-I institutions ($M= 51.3, SD= 11$) than Division-II institutions ($M= 41.6, SD= 11.9$). Athletic training student mean scores for leadership practice "Encourage" were significantly higher in Division-I institutions ($M= 49.4, SD= 11.1$) than Division-II institutions ($M= 37.1, SD= 13.9$).

Taken together, these results suggest that athletic training student perceptions of their program director's leadership practice frequency use was significantly higher in the NCAA Division-I institution and significantly lower in the NCAA Division-II institution, even though Division-I and Division-III institutions are comparable. Due to this study's small sample size, these results cannot be generalized to the entire population. Students from NCAA Division-I

intuitions reported significantly higher leadership practice frequency scores for their program director. Constituents who portray their leader frequently demonstrating the five leadership practices will have higher levels of internal motivation and commitment to the program; therefore, hold higher levels of dedication to passing the BOC examination on the first attempt (Kouzes & Posner, 2016). These results may be explained by institutional acceptance standards. Division-I universities may require higher standards to become accepted into the institution, such as a high GPA or SAT score compared to Division-II and Division-III institution. When comparing students from various university divisions, those enrolled at the Division-I level may already be a high caliber student compared to other students and may be better prepared to pass the BOC examination on the first attempt.

Discussions and Conclusions

Overall, this study found significant differences and common themes throughout the results of the data regarding athletic training student perceptions of their program director's leadership behaviors defined by Kouzes' and Posner's (2002) the Five Leadership Practices: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. Athletic training program directors self-reported higher leadership practice frequency scores when compared to their students. Participants' responses supported the common themes throughout this study that the leadership practices "Enable Others to Act" and "Model the Way" were most frequently reported used practice among athletic training program directors. With regards to gender, athletic training students reported higher leadership practice frequency scores for female program directors over males.

The consistent findings suggest athletic training student perceptions of their program director's frequency of leadership practice use will impact athletic training student performance

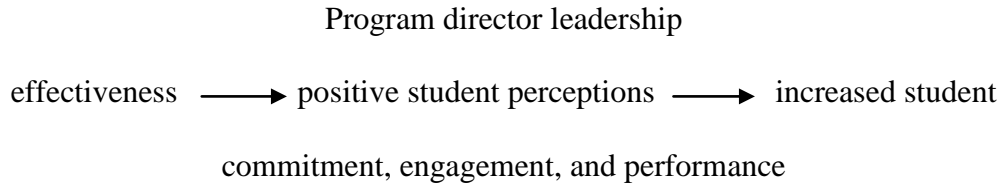
on the national Board of Certification examination. The researcher linked high leadership practice frequency scores (scores that were closer to 60) from athletic training students to satisfactory pass rates within athletic training programs. Satisfactory pass rates were defined by pass rates that met the CAATE criteria of 70% or above throughout a 3-year aggregate. Athletic training students that viewed their program director frequently utilizing all 5 leadership practices resulted in satisfactory BOC examination scores. Specifically, athletic training students who viewed their program director frequently utilizing leadership practice “Model the Way” resulted in increased likelihoods of first attempt BOC examination pass rates. The athletic training students also viewed female program directors utilizing the leadership practices more frequently than male program directors. Conclusions can be made that athletic training program directors do portray leadership behaviors (model, inspire, challenge, enable, and encourage), but how often athletic training students view these behaviors is the key to success. Kouzes and Posner (2012) confirm, “...leader behavior makes a profoundly positive difference in people’s commitment and performance” (p. 25). McNeese’s (1995) study confirmed nursing staff who perceived their managers utilizing leadership practices “Enable” and “Model” more frequently reported positive outcomes in job satisfaction, productivity, and organizational commitment. Recognizing the connection between frequent utilization of program director leadership practice to athletic training student levels of engagement and commitment within the athletic training education program will help establish satisfactory BOC examination results.

Recommendations

For Practice

Athletic training program directors should appreciate the various leadership responsibilities that are expected of them. Program directors are leaders within their education

program. They should embrace the idea of using leadership practices (model, inspire, challenge, enable, and encourage) to influence actions of others (Laurent & Bradney, 2007; Kutz & Scialli, 2008; Katch et al., 2013; Denker, 2014). Athletic training student success on the BOC examination is strongly influenced by the athletic training program director's frequency of leadership behavior (model, inspire, challenge, enable, and encourage) use. Kouzes' and Posner's (2012) research describe the more successful and effective leaders are those who frequently demonstrate all five leadership practices. Doing so will increase engagement, commitment, loyalty, and motivation from constituents (Kouzes & Posner, 2012; Benes & Mazerolle, 2014; Bowman, Dodge, & Mazerolle, 2015; Bowman, Hertel, & Wathington, 2015). Athletic training students should be fully engaged throughout their educational experience to build self-motivation and prepare them to become young professionals who can manage all athletic training related responsibilities (Kutz, 2012; Bowman, Hertel, & Wathington, 2015). This study revealed the more the program director demonstrates the leadership behaviors (model, inspire, challenge, enable, and encourage), the more satisfactory BOC examination results will be for that program. This research supports the fact that athletic training program directors are already leading to some extent. The key message and challenge for athletic training program directors is "how to increase the frequency with which you engage in these leadership practices [model, inspire, challenge, enable, and encourage], learning about what they mean, and becoming more comfortable with their use" (Kouzes & Posner, 2016, p. 31). Utilizing information from the previous literature discussed above, and the outcomes of this study, a leadership framework for athletic training program directors can be depicted as:



Another important theme this research supports is athletic training students who perceive their program director using leadership practice “Model the Way” are more likely to pass the BOC examination on the first attempt. The specific leadership behaviors associated with “Model the Way” include leaders who “clarify values by finding your voice and affirming shared values” and “set the example by aligning actions with shared values” (Kouzes & Posner, 2012, p. 29). Learning these behaviors involves determining one’s own values and beliefs and relaying that message in your own words to the organization (Kouzes & Posner, 2012). A leader that utilizes “Model the Way” also has to be aware of their constituents’ values; they must speak for the team, not to the team, and show their constituents through actions they mean what they say (Kouzes & Posner, 2012). Nursing managers who utilized modeling behaviors were positively associated with effectively meeting patients’ needs (Cardin, 1995). Often, current and aspiring athletic training program directors will learn leadership techniques through experience or observation (Laurent & Bradney, 2007). Program directors must acknowledge they are already practicing leadership behaviors, but be willing to invest in leadership development in order to learn how to improve their leadership behaviors during complex and challenging times (Kouzes & Posner, 2001).

For Future Research

As the educational realm of athletic training continues to change and grow, leadership research among this profession should also expand. Leadership itself is multidimensional and complex so other variables possibly influencing leadership behaviors should be investigated.

The influences of athletic training program director ethnicity, age, and years of experience should be explored. There continues to be conflicting views regarding athletic training gender and leadership behaviors. Further research should be thoroughly conducted to explore within this area of athletic training education.

There were multiple significant findings throughout this study that are important for the future of athletic training education leaders. In the future, this study should be expanded; the potential sample population should consist of a broader, random sample across various regions of the United States. Gaining athletic training students' perspectives from across the country (more heterogeneous group) would create an entirely new research project while still focusing on the 5 leadership practices (model, inspire, challenge, enable, and encourage). Due to this study's small number of participants, each research question should be further investigated on a larger scale. It would also be beneficial to replicate this study involving other members of the athletic training education team, such as the clinical education coordinator and preceptors. This study also utilized quantitative data only. Utilizing the LPI-360 survey with qualitative, interview question analysis may offer more comprehensive reviews in future studies.

Limitations

There are limitations to this study's findings as there are in any research project. The participants are from a small, homogeneous group with regards to organizational and educational backgrounds. The sample population was not large enough to make generalized assumptions. The Leadership Practices Inventory-360 survey (Kouzes & Posner, 2013a) has not been utilized often in athletic training educational settings so the comparisons with other studies were restricted. It was assumed that all participants answered honestly regarding self-reported

leadership behaviors and their program directors' leadership behaviors, but the data was self-reported and could result in self-report bias.

Summary

Athletic training education program directors often utilize transformational leadership behaviors while completing their roles and responsibilities as an administrator within the program. The leadership practices developed by Kouzes and Posner (2012), model, inspire, challenge, enable, and encourage, should be reviewed and utilized by athletic training program directors to create positive student perceptions. Athletic training students who view their program director utilizing all five leadership practices are more likely to have a positive experience within their education program, such as have increased engagement, commitment, and dedication with the program. Positive student experiences are linked to higher academic performance, so these athletic training students could potentially demonstrate satisfactory results on the Board of Certification examination.

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Appendix A

Cover Letter (E-mail) to Program Directors

Dear Athletic Training Program Director,

I am a doctoral candidate in the Administrative and Leadership Studies program at Indiana University of Pennsylvania. I will be conducting a research study as part of my degree requirements and I would like to invite you to participate.

You are being asked to partake in a survey entitled the Leadership Practices Inventory-360 Online (LPI). The survey consists of 4 demographic questions and contains 30, ten-point Likert scale statements regarding practiced leadership behaviors that should take approximately 10 to 15 minutes to complete.

If you decide to participate, your involvement will include completing the LPI-Self and then inviting your junior and senior athletic training students and first-year alumni to complete the LPI-Observer.

If interested, please contact me immediately to schedule an on-campus survey session.

During the survey, you will be describing your own practiced leadership behaviors. The students will have the opportunity to describe your practiced leadership behaviors from their perspectives by completing the LPI-Observer. My study is investigating the relationships between leadership practices of undergraduate athletic training program directors and overall program performance on the BOC examination. As a fellow athletic trainer, your knowledge and opinions regarding this topic makes your input invaluable.

This is a completely anonymous questionnaire and upon submission, neither your name nor your e-mail address will be attached to your responses. As administrator of the LPI, I view all participants as an identification number and will have no access to names, e-mail addresses or associated institutions. Athletic training student results and participation is also completely anonymous to me as well as to the program director.

Your participation in this study is completely voluntary. I have attached a copy of the Participant Consent Form that will need to be signed by each volunteer participant. The form outlines my purpose, procedures, risks and benefits of participation, confidentiality and participant rights. Please read this attachment before you confirm your desire to participate. Participants must be 18 years of age or older. Information you provide will be kept strictly confidential. Information collected will not be used for any purpose outside of this research project.

If you wish to be included as a participant in this research study, please contact me no later than March 1, 2016. Thank you for your time and contribution!

Sincerely,

Jackie Durst, MS, LAT, PES
Primary Investigator, Candidate for Doctorate Education, Indiana University of Pennsylvania
nlzq@iup.edu or 301-697-2801

Dr. David Piper, Committee Chair
ELR, ALS Professor, Indiana University of Pennsylvania
David.piper@iup.edu

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the protection of human subjects.

This survey is not approved or endorsed by the NATA. It is being sent to you because of NATA's commitment to athletic training education and research.

Please forward to Athletic Training Students:

Dear Athletic Training student,

I am a doctoral candidate in the Administrative and Leadership Studies program at Indiana University of Pennsylvania. I will be conducting a research study as part of my degree requirements and I would like to invite you to participate.

You are being asked to partake in a survey entitled the Leadership Practices Inventory-360 Online (LPI). The survey consists of 9 demographic questions and contains 30, ten-point Likert scale statements regarding practiced leadership behaviors that should take approximately 10 to 15 minutes to complete.

If you decide to participate, your involvement will include completing the LPI-Observer. Specifically, you will be describing your Program Director's practiced leadership behaviors from your perspective. My study is investigating the relationships between leadership practices of undergraduate athletic training program directors and overall program performance on the BOC examination. As an athletic training student, your knowledge and opinions regarding this topic makes your input invaluable.

This is a completely anonymous questionnaire and upon submission, neither your name nor your e-mail address will be attached to your responses. As administrator of the LPI, I view all participants as an identification number and will have no access to names, e-mail addresses or

associated institutions. Your Program Director will not have access to your survey results, nor will they know your participation status.

Your participation in this study is completely voluntary. You may choose to discontinue participation at any time without penalty. Your completion of the survey implies your consent to participate in this study. If you choose to withdraw your consent to participate at a later time, you can notify the investigator by emailing to nlzq@iup.edu. Information you provide will be kept strictly confidential. Information collected will not be used for any purpose outside of this research project.

Shortly, you will receive a separate e-mail from notifications@pfeifferassessments.com with a subject line that reads, “**LPI 360 Online - Request to Assess: (Program Director’s ID Number).**” It will contain a link to the LPI Online system. Completing the LPI-Observer consists of 2 simple steps which I have attached for you.

If you wish to be included as a participant in this research study, please complete this survey no later than May 31, 2016. Thank you for your time and contribution!

Sincerely,

Jackie Durst, MS, LAT, PES
Primary Investigator, Candidate for Doctorate Education, Indiana University of Pennsylvania,
nlzq@iup.edu or 301-697-2801

Dr. David Piper, Committee Chair
ELR, ALS Professor
David.piper@iup.edu

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the protection of human subjects.

This student survey is not approved or endorsed by the NATA. It is being sent to you because of NATA’s commitment to athletic training education and research.

Appendix B

Research Participant Informed Consent Form: LPI-Observer

INVESTIGATOR: Jacqueline Durst, Candidate for Doctorate of Education, Indiana University of Pennsylvania

PURPOSE: To investigate the relationships between athletic training students' perceptions of their undergraduate Program Directors' leadership behaviors (modeling, inspiring, challenging, enabling, and encouraging) and overall athletic training program success (measured by the Board of Certification examination performance; specifically, individual program first-attempt passing rates).

PROCEDURES: With your permission, we would like you to participate in the study by completing an online questionnaire about your perceptions of your program director's leadership behaviors. This study involves juniors and seniors within your athletic training education program as well as alumni who have recently graduated from your program. Participants must be 18 years of age or older. This study does not involve any treatment; just the collection and study of data.

RISKS AND BENEFITS: Risks to the participants are minimal. There is a potential risk for a confidentiality breach within an online computer system. This risk is minimal since the LPI's company, Wiley & Sons, has taken extra precautions to maintain the security, integrity and privacy of any information submitted by its users. The LPI and its company Wiley & Sons strive to maintain the security, integrity and privacy of any information submitted by its users. This survey instrument has been deemed valid and reliable by years of research. It has been utilized by various organizations globally and is well respected by researchers. All individual responses to the survey will be grouped and only grouped data will be analyzed to maintain confidentiality. The surveys are anonymous and even the program director will not have access to students' responses nor will they know which students participated in the survey. The researcher cannot guarantee that you will receive any benefits from the study; however, your participation may contribute to the literature on athletic training student perceived leadership behaviors as described in the purpose above.

TIME INVOLVEMENT: Ten to fifteen minutes of your time is required to complete the questionnaire.

CONFIDENTIALITY: Survey responses will be collected through the LPI online data collection system. All electronic data will be stored in password-protected software and computer to which the researcher will only have access. The researcher will be able to view the results without identifying participant information. E-mail addresses do not correspond to participants' responses. The program director e-mail addresses are only utilized for distributing the surveys, which are available online on the program accreditation web site (www.caate.net). Program directors will not have access to their students' responses nor will they know which students have participated in the survey. All individual responses will be held in strict

confidence. No individual responses will be reported. All individual responses will be combined and only group results will be analyzed and reported. In accordance with federal regulations, data will be maintained confidentially for 3 years from completion of the project. Group results will be published in Dissertation Abstracts.

COMPENSATION: Participants who complete the questionnaire will not receive any direct payment or compensation for participation in this study.

PARTICIPANTS' RIGHTS TO PARTICIPATE, DECLINE OR WITHDRAW:

Your decision whether or not to participate in this study will not affect your status as a student at your institution or within your athletic training program. If you read this form and have decided to participate in the study, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. If you wish to withdraw at any time, write or call the researcher using the contact information below.

CONTACT INFORMATION: If you have any questions about this research study, its procedures, risks or benefits, you should contact the researcher: Jacqueline Durst at 301-697-2801 or nlzq@iup.edu, or Indiana University of Pennsylvania, Committee Chair, Dr. David Piper at dpiper@iup.edu. If at any time, you feel you have been hurt by being a part of this study or are not satisfied with how this study is being conducted, or your rights as a research participant, please contact: **Indiana University of Pennsylvania, IRB at irb-research@iup.edu or the Assistant Dean for research at 724.357.7730 or electronically at grad-research@iup.edu.**

Signature of Participant: _____ **Date:** _____

Witness Signature: _____ **Date:** _____

THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS.

THIS PROJECT HAS BEEN APPROVED BY THE *Name of Participating Institution* INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS.

THIS STUDENT SURVEY IS NOT APPROVED OR ENDORSED BY THE NATA. IT IS BEING SENT TO YOU BECAUSE OF NATA'S COMMITMENT TO ATHLETIC TRAINING EDUCATION AND RESEARCH.

Appendix C

Research Participant Informed Consent Form: LPI-Self

Participant Consent Form Athletic Training Program Director

INVESTIGATOR: Jacqueline Durst, Candidate for Doctorate of Education, Indiana University of Pennsylvania

PURPOSE: To investigate the relationships between athletic training students' perceptions of their undergraduate Program Directors' leadership behaviors (modeling, inspiring, challenging, enabling, and encouraging) and overall athletic training program success (measured by the Board of Certification examination performance; specifically, individual program first-attempt passing rates).

PROCEDURES: With your permission, we would like you to participate in the study by completing an online questionnaire about your own perceptions of your leadership behaviors. This study also involves surveying juniors and seniors within your athletic training education program as well as alumni who have recently graduated from your program. Participants must be 18 years of age or older. This study does not involve any treatment; just the collection and study of data.

RISKS AND BENEFITS: Risks to the participants are minimal. There is a potential risk for a confidentiality breach within an online computer system. This risk is minimal since the LPI's company, Wiley & Sons, has taken extra precautions to maintain the security, integrity and privacy of any information submitted by its users. The LPI and its company Wiley & Sons strive to maintain the security, integrity and privacy of any information submitted by its users. This survey instrument has been deemed valid and reliable by years of research. It has been utilized by various organizations globally and is well respected by researchers. All individual responses to the survey will be grouped and only grouped data will be analyzed to maintain confidentiality. The surveys are anonymous. The program director will not have access to students' responses nor will they know which students participated in the survey. The researcher cannot guarantee that you will receive any benefits from the study; however, your participation may contribute to the literature on athletic training student perceived leadership behaviors as described in the purpose above.

TIME INVOLVEMENT: Ten to fifteen minutes of your time is required to complete the questionnaire.

CONFIDENTIALITY: Survey responses will be collected through the LPI online data collection system. All electronic data will be stored in password-protected software and computer to which the researcher will only have access. The researcher will be able to view the results without identifying participant information. E-mail addresses do not correspond to participants' responses. The program director e-mail addresses are only utilized for distributing the surveys, which are available online on the program accreditation web site (www.caate.net).

Program directors will not have access to their students' responses nor will they know which students have participated in the survey. All individual responses will be held in strict confidence. No individual responses will be reported. All individual responses will be combined and only group results will be analyzed and reported. In accordance with federal regulations, data will be maintained confidentially for 3 years from completion of the project. Group results will be published in Dissertation Abstracts.

COMPENSATION: Participants who complete the questionnaire will not receive any direct payment or compensation for participation in this study.

PARTICIPANTS' RIGHTS TO PARTICIPATE, DECLNE OR WITHDRAW:

Your decision whether or not to participate in this study will not affect your status as a faculty member at your institution or within your athletic training program. If you read this form and have decided to participate in the study, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. If you wish to withdraw at any time, write or call the researcher using the contact information below.

CONTACT INFORMATION: If you have any questions about this research study, its procedures, risks or benefits, you should contact the researcher: Jacqueline Durst at 301-697-2801 or nlzq@iup.edu, or Indiana University of Pennsylvania, Committee Chair, Dr. David Piper at dpiper@iup.edu. If at any time, you feel you have been hurt by being a part of this study or are not satisfied with how this study is being conducted, or your rights as a research participant, please contact: **Indiana University of Pennsylvania, IRB at irb-research@iup.edu or the Assistant Dean for research at 724.357.7730 or electronically at grad-research@iup.edu.**

Signature of Participant: _____ **Date:** _____

Witness Signature: _____ **Date:** _____

THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS.

THIS PROJECT HAS BEEN APPROVED BY THE *Name of Participating Institution* INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS.

THIS SURVEY IS NOT APPROVED OR ENDORSED BY THE NATA. IT IS BEING SENT TO YOU BECAUSE OF NATA'S COMMITMENT TO ATHLETIC TRAINING EDUCATION AND RESEARCH.

Appendix D

Program Director (Leader) Instructions for Completing LPI 360 Online

As a leader, completing the LPI-Self consists of 3 simple steps: registering, completing the self-assessment, and assigning observers.

1. Register

You will receive a separate email message from notifications@pfeifferassessments.com with a subject line that reads, “*LPI Online – Leadership Skills Assessment.*”

- **If you are new to the LPI**, click on the link in your welcome email which will take you to the registration page. If clicking on the link does not take you to the registration page, please try copy/pasting the link into your browser. Complete all of the requested the information including the secret questions.
 - **Do not use your real name when registering. Please use “Leader” as your last name. Use the ID number within this e-mail’s subject line as your first name.**

Note: If you have multiple email addresses, please click on “Add Another Email” during registration and enter them there. It can be clicked multiple times to add multiple addresses.

- **If you have used LPI before as a Leader or Observer**, the email you receive will contain the link to the log on page, as well as your user name. Click on the link to log into LPI.

Note: If you do not remember your password, please use the forgotten password link at the login page.

2. Complete the Assessment

When you’ve completed the registration process, you will be logged into LPI. Once you’re logged in, you can complete the Self survey by clicking on “Start Assessment.” Click Submit at the end of the survey to have your answers recorded.

Note: Once you submit your survey your answers cannot be changed

3. Assign Observers

Once logged in click on Manage Observers. Then, enter in your observers’ information and make sure to save it. You may use students’ initials instead of first and last names.

You do not have to remind Observers to complete the survey. The administrator will distribute reminder notifications.

NOTE: Once a survey is submitted, the answers cannot be changed.

NOTE: The LPI system will “time out” if left idle for 45 minutes and all work will most likely be lost.

Trouble?

If you experience any issues with your survey and need assistance please contact Wiley Technical Support through the support site at: <http://ipi.custhelp.com/> or you can call 800-762-2974. Or you may contact your administrator, Jackie Durst at nlzq@iup.edu.

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the protection of human subjects.

This project has been approved by the (Name of Participating Institution) Institutional Review Board for the protection of human subjects.

This student survey is not approved or endorsed by the NATA. It is being sent to you because of NATA's commitment to athletic training education and research.

Appendix E

Athletic Training Student Instructions for Completing LPI 360 Online

You are being asked to partake in a survey entitled the Leadership Practices Inventory-360 Online (LPI). Your involvement will include completing the LPI-Observer. **Specifically, you will be describing your Athletic Training Program Director's practiced leadership behaviors.**

My study is investigating the relationships between leadership practices of undergraduate athletic training program directors and overall program performance on the BOC examination. As an athletic training student, your knowledge and opinions regarding this topic makes your input invaluable.

Completing the LPI-Observer consists of 2 simple steps: registering, and completing the assessment.

1. Register

You will receive a separate email message from notifications@pfeifferassessments.com with the subject line that reads, "*LPI 360 Online - Request to Assess: (Leader, ID number)*." It will contain a link to the LPI Online system.

- **If you are new to the LPI, click on the link in your welcome email which will take you to the registration page. Complete all of the requested information including the secret questions.**

Note: If you have multiple email addresses, please click on "Add Another Email" during registration and enter them there. It can be clicked multiple times to add multiple addresses.

- **If you have used LPI before as an Leader or Observer, the email you receive will contain the link to the log on page. Click on the link and then enter your username and password to login. You may be prompted to complete a short registration step before you can login.**

Note: If you do not remember your username or password, please use the forgotten username / password link at the login page.

2. Complete the Assessment

If you are selected as an Observer, you will receive a notification email from notifications@pfeifferassessments.com requesting your feedback. You should also see each of these assessments appear on your LPI dashboard. **Just click on "All Assessments" then "Take Assessment" next to their name or ID number to begin.**

NOTE: Once a survey is submitted, the answers cannot be changed.

NOTE: The LPI system will “time out” if left idle for 45 minutes and all work will most likely be lost.

Trouble?

If you experience any issues with your survey and need assistance please contact Wiley Technical Support through the support site at: <http://lpi.custhelp.com/> or you can call 800-762-2974. **Or you may contact your administrator, Jackie Durst at jrdurst@frostburg.edu.**

This is a completely anonymous questionnaire and upon submission, neither your name nor your e-mail address will be attached to your responses. As administrator of the LPI, I view all participants as an identification number and will have no access to names, e-mail addresses or associated institutions. **Your Athletic Training Program Director will not have access to your survey results, nor will they know your participation status.**

Your participation in this study is completely voluntary. You may choose to discontinue participation at any time without penalty. Your completion of the survey implies your consent to participate in this study. If you choose to withdraw your consent to participate at a later time, you can notify the investigator by emailing to jrdurst@frostburg.edu. Information you provide will be kept strictly confidential. Information collected will not be used for any purpose outside of this research project.

Sincerely,

Jackie Durst, MS, LAT, PES

Primary Investigator, Candidate for Doctorate Education, Indiana University of Pennsylvania,
jrdurst@frostburg.edu or 301-697-2801

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the protection of human subjects.

This project has been approved by the (Name of Participating Institution) Institutional Review Board for the protection of human subjects.

This student survey is not approved or endorsed by the NATA. It is being sent to you because of NATA's commitment to athletic training education and research.