BURNOUT IN ATHLETIC TRAINING STUDENTS: UTILIZATION OF STRESS

REDUCING STRATEGIES

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ABSTRACT

Burnout has been associated with the helping professions for many years. Athletic training is a profession that has experienced burnout, with a decline in all athletic training professionals after the age of 30 (Kahanov and Eberman, 2011). This dissertation in practice, not only deals with testing the level of stress in athletic training students but also the implementation of stress reducing strategies and techniques to assist with stress and burnout. Therefore, this research will provide answers as to the levels of stress athletic training students experience. In addition, this research will provide insight on the stress reducing strategies and techniques most useful for this group of athletic training students. The instrument developed for this study was a modification of the Athletic Training Burnout Inventory (ATBI) (Clapper and Harris, 2008). The instrument developed for this dissertation in practice was the Athletic Training Student Burnout Inventory (ATSBI). Questions from the ATBI were modified, removed, and created to provide wording that was appropriate for this group of athletic training students. The ATSBI was administered over four time periods: December 2015, April 2016, September 2016, and December 2016. During the course of the first two administration periods, December 2015 and April 2016, the athletic training students received stress reducing information. During the course of the last two administration periods, September 2016 and December 2016, the athletic training students received stress reducing strategies and techniques and were asked to practice them on a weekly basis. There was a total of eight stress reducing strategies and techniques utilized by this group of athletic training students over the course of the semester. On a weekly basis, the students provided feedback on the stress reducing strategy or technique. The quantitative results showed little statistical significance; however, the qualitative information reported as the most beneficial stress reducing strategies and techniques for this group of athletic training students

was the following: listening to music, time usage chart and schedule, coloring, the to-do list, and

positive thinking.

DEDICATION

This dissertation in practice is dedicated to my parents, both who I admire and strive to make them

proud. This is also dedicated to my children, they are only beginning their educational journey, I

hope they continue to strive to achieve great accomplishments. Eric, Alex, and Alyson always

continue to push yourselves and reach for the stars!

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CHAPTER ONE: INTRODUCTION

This dissertation in practice was conceptualized because the researcher is the program director of an undergraduate athletic training program and vested in the athletic training community. Many professional colleagues have experienced burnout and stress throughout their careers. The researcher has experienced this and has known professionals that leave the athletic training profession due to burnout. In addition to professionals, many athletic training students are impacted by the stress of the education and clinical rigor surrounding an athletic training program. As a program director, many of these soon to be professionals or early professionals, leave the profession early, or not even start working in the profession. This is concerning, not only as an educator but also as an athletic training professional. Why do these students have the impression athletic training cannot be a fruitful and rewarding profession? Are there reasons behind this group of athletic training students leaving or not even starting the profession? These are questions that started the thoughts of what to investigate for this dissertation in practice. Therefore, this researcher deemed the topic of burnout to be important and it needed further investigation. Furthermore, the researcher wanted to investigate if there was anything that can be done to prevent or reduce stress and avoid burnout.

Burnout has been defined by Smith (1986) as psychological, emotional, and physical withdrawal from a previously enjoyable activity. Extensive research has shown that burnout is a major issue in helping professions (Maslach & Goldberg 1993; Kahanov & Eberman, 2011). The professions that are typically defined in the literature as helping professions include teachers, school psychologists, health care professionals, coaches, and law enforcement (Huebner, 1993; Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001; Maslach, Schaufeli, & Leiter 2008). For example, research indicated that 56% of respondents from a survey of 598 oncologists

reported burnout (Holland & Neimeyer, 2005; Whippen & Canellos, 1991). Job stress has typically been the cause of the attrition in the helping profession fields. Mental health and working conditions are the keys to job stress in the helping profession fields. Maslach and Jackson (1985) have further defined burnout as having three characteristics: "emotional exhaustion," "depersonalization," and "negative personal accomplishment" (p. 837-838). "Emotional exhaustion" refers to the feeling of being overwhelmed or overextended by the job demands (Maslach & Jackson, 1985, p. 837). "Depersonalization" refers to the development of negative feelings and attitudes toward the client or patient. For example not being able to connect on a personal level with a patient or client (Maslach & Jackson, 1985, p. 837). "Negative personal accomplishment" refers to having a negative implication of the accomplishments that take place in the work setting (Maslach & Jackson, 1985, p. 838). Overall, burnout is everywhere and the helping professions need to be careful in the dealings of stress to avoid burnout.

Burnout has been associated with unproductive work behaviors: absenteeism, high personnel turnover, and reduced productivity. These negligent behaviors have serious implications for the helping profession fields. For example, a nurse experiencing burnout may not take the necessary steps needed to treat patients on their death beds. This kind of negligence can cause undue harm both to patients and families. In addition, an increase in substance abuse has also been reported in the helping professions (Huebner, 1993; Maslach & Jackson, 1985). For example, surgeons are impaired at least 15% of the time they spend with patients (Balch, Freischlag & Shanafelt, 2009). Other issues complicate the roles that professionals play (Huebner, 1993). There are three frequently mentioned roles in burnout; role ambiguity, role conflict, and role overload. Role ambiguity occurs when role definitions are unclear. Role

conflict leads the professional to have inconsistent role expectations or service demands. Role overload refers to circumstances in which helping professionals become strained in terms of job responsibilities. For example, role overload issue is due to a large caseload and insufficient time to handle all of the associated work (Huebner, 1993; Mazerolle, Walker, & Thrasher, 2015).

Like other professionals in the helping and health care professions, athletic trainers work collaboratively with physicians to offer preventative services, emergency care, clinical diagnosis, and therapeutic interventions for injuries and medical conditions (National Athletic Trainers' Association, 2015). The athletic trainer may work in a multitude of settings, including hospitals, colleges, secondary schools, physicians' offices, public health entities, emergency rooms, workplaces, industries, performing arts, professional sports, sports medicine clinics, and the military (National Athletic Trainers' Association, 2015). The increase and evolution of educational requirements and standards along with the increase in practice settings have resulted in stressful environments for some students and professionals. These increases have a direct correlation to burnout as defined by Smith (1986). In fact, burnout is thought to be the main reason for early departure from the athletic training profession (Kahanov & Eberman, 2011).

The problem of this early departure is compounded by the challenge of filling athletic training jobs in the first place. Because athletic training is a challenging major for students, it requires a great deal of time, energy, and knowledge to be successful. Students often complete their degrees in their early 20's and many leave the profession by their late 20's because they are experiencing burnout (Kahanov & Eberman, 2011). According to research, 30% of athletic trainers experience burnout (Giaccobbi, 2008; Kania, Meyer, & Ebersole, 2009). This decline means that the services athletic trainers provide to student-athletes, patients, and students may be compromised. This impact can be seen in many parts of the United States in which athletic

training services are needed, but athletic trainers are not available. For example, the Kory Stringer Institute Atlas Project is an ongoing project that is currently calculating how many athletic trainers are providing services to the high schools in each state. (See Figure 1) (http://ksi.uconn.edu/nata-atlas/) (National Athletic Trainers' Association, 2016). Thus, the combination of challenging job training and education and systemic burnout exacerbates the difficulties of training and retaining qualified athletic trainers.
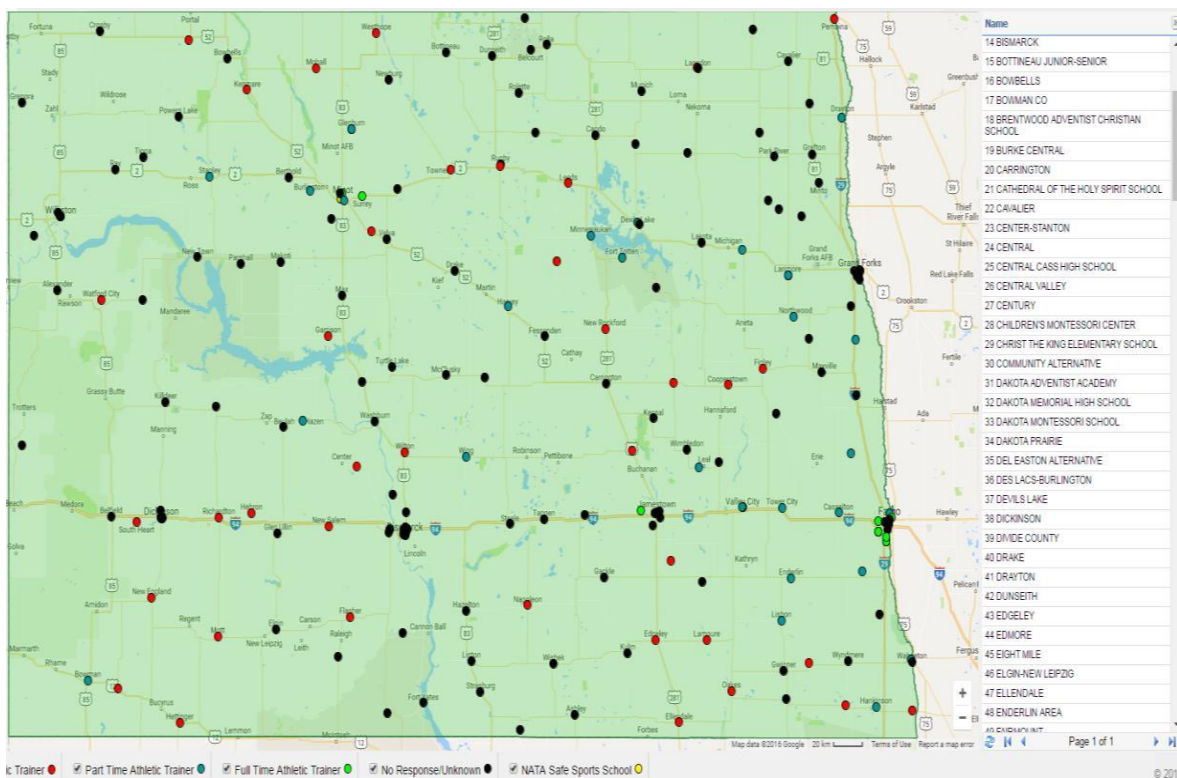
Figure 1. High schools in ND and athletic trainers

Like other helping professions, there are many reasons underlying the problem of burnout. For athletic trainers specifically, some possible reasons for burnout are as follows: First, the evolution of athletic training has changed from the inception. There are now more stringent requirements for the athletic training student to become a professional than were historically necessary (Commission on Accreditation of Athletic Training Education, n.d.). The increase in

graduation requirements place added stress on athletic training students. Second, to find a work-life balance for an athletic training professional is difficult. The time that some have dedicated to the profession of athletic training has taken away from family time. Early research, which will be discussed in chapter two, implies the early departure from athletic training is due to family or monetary constraints (Pitney, 2006). Third, the role strain that athletic training professionals have on a daily basis affects their stress levels. The extra demands that are placed on athletic trainers, not only external but internal demands, has affected the athletic trainer. For example, the external demand of completing paperwork needed for documentation purposes and the internal demand of time constraints to fill out the paperwork completely. These demands may cause undue pressures for these professionals. Therefore, this information will be utilized in this dissertation of practice.

Compounding these alarming burnout statistics is the US Bureau of Labor outlook for employment for athletic trainers, which is projected to increase by 21% by 2024 (Bureau, U. S. of Labor Statistics. (2012)). Currently, many jobs go unfilled due to the lack of athletic training professionals. In fact, according to the National Athletic Trainers' Association (NATA) Career Center, there are currently 322 posted for certified athletic trainers (National Athletic Trainers' Association, 2016). The potential growth for the profession and the troublesome decline in seasoned athletic trainers begs the question, "Will there be enough qualified athletic trainers to fill these positions?"

Furthermore, the athletic training profession is continuously evolving to meet increasing demands for knowledge, clinical skills, and professionalism. The major change is the increased body of knowledge that the athletic training student needs to possess in order to pursue a career. The classroom setting involves class instructional time as well as outside study time to master

the academic requirements and preparation. The student is to spend time outside of class to ensure the preparation for class is being complete. For example, if the student has a two-credit class they should be spending four hours outside of class working in preparation for the class. This hour amount is inadequate for these students to satisfactorily prepare because the classroom setting is designed to provide the background knowledge, experience, and hands-on practice needed for competency in athletic training services. Students must be proficient in over 100 different competencies by the time they complete a degree in athletic training (National Athletic Trainers' Association, 2016). The accreditation standards have evolved over time to support the student and at the same time increase the rigor and requirements of an educational program in order to increase the knowledge and skill of the entry-level athletic trainer. Currently, students must divide their time between a classroom setting and a clinical setting. This division is to assist the student to become more proficient with clinical skills prior to graduation.

The clinical setting plays an important role in the students' educational process. During the inception of athletic training, future professionals learned under the auspices of the practicing athletic trainer, with the majority of time spent in the clinical setting. In 1970, the certification exam to become a Certified Athletic Trainer (ATC) was instituted (National Athletic Trainers' Association, 2015). The times were simpler then; the didactic requirements to become an athletic training professional were not codified. The clinical experience allowed the future professional to practice kinesthetic skills in order to become proficient. However, the profession recognized the need for didactic training, and the first education program for athletic training, National Athletic Trainers' Association (NATA), was started in 1972. Thus the evolution of both didactic and clinical skills have advanced the profession of athletic training. This evolution has also intensified the stress on those who train for this profession. In addition, this development of

requirements, education, practice settings, and standards have also created stressful environments   for some students, faculty, and professionals.

Currently, the clinical setting is designed to incorporate and implement student's knowledge and practice into a real-life situation supervised by a healthcare professional called a preceptor. The demands placed on all the preceptors are great. The athletic training students spend roughly 53% of their time in clinical experience (Weidner & Henning, 2002). Accreditation takes a strict approach to student workloads in order to ensure the students are able to maintain a healthy balance. For example, the student who has 22 hours in the classroom should only be in clinical experience for 18 hours to make a total hour commitment of 40 hours per week. All students are mandated to have a day off of clinical experience every week (Commission on Accreditation of Athletic Training Education, n.d.). The time constraints that are placed on the athletic training student may lead to higher stress levels, which may eventually lead to burnout even before they reach professional status. The programs attempt to teach how to balance work and life through the use of hourly limitations in clinical experience, however, this approach seems to be insufficient (Commission on Accreditation of Athletic Training Education, n.d.).

The maintenance of a healthy work-life balance has become a new goal in the academic realm of athletic training. The accreditation standards, specifically the health and safety standards, put in place by the CAATE are an attempt by the profession to guard against early burnout (Commission on Accreditation of Athletic Training Education, n.d.). The purpose of the requirement limiting students' clinical experiences is to assist in the students' work-life balance. Yet, the number of practicing athletic trainers above the age of 30 is still declining. For example, statistics show that there is a decline in the number of female athletic trainers 28 and older and a

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general decline, regardless of gender, age 30 and older. In fact, approximately 43% of female Certified Athletic Trainers from the ages of 27-34 quit (Kahanov & Eberman, 2011). This evidence in the decline in the number of young female athletic trainers and the decline of young athletic trainers overall emphasizes the fact that professionals are abandoning the field (Kahanov & Eberman, 2011). One of the major factors in this decline is the lack of a work-life balance for Certified Athletic Trainers (Capal, 1986; Mazerolle & Pitney, 2016).

Work-life balance is an important topic and is not only an issue in athletic training but also other healthcare professions. The demands of parenting or caring for another family member may pull any professional in different directions and create a conflict between work and family demands. If professionals do not have support systems, they may suffer from job stress eventually leaving the profession. For athletic trainers specifically, some settings require varying schedules and late night commitments that hinder family commitments during the evening. There are many articles and books, detailed in Chapter Two, regarding work-family conflict and work-life balance that will be discussed further in chapter two-add a fact or two from that. Concerns about finding a balance are important for the retention of professionals in athletic training. Being able to balance the demands of the job which include; long hours, patient-care needs, administrative duties, supervision of athletic training students, and travel is imperative to the balance of work and home. A goal of the profession should be to encourage a work-life balance for both athletic training students and professionals.

The complexity of balancing the different roles is challenging for many athletic training professionals. When athletic trainers are unable to maintain a healthy balance something may suffer and potentially lead to professional burnout. Role strain has been researched as part of burnout; specifically in athletic training (Henning & Weidner, 2008). This data shows there is a

need to define roles and manage each role in the professional's life to avoid burnout. The

stressors for athletic trainers will eventually lead to professional burnout if left unresolved. Role

strain is associated with an internal feeling of having to fulfill multiple different roles (Mazerolle

& Pitney, 2016). This may also be associated with external stressors. Role strain is another

reason the athletic trainer may leave the profession. This consists of both role overload and role

conflict. Role overload is a condition when one has a difficulty performing job duties because

there is too much to do or not enough time to complete all of the tasks (Mazerolle & Pitney,

2016). Role conflict is the inability to meet expectations from a number of sources and difficulty

prioritizing the expectations (Mazerolle & Pitney, 2016). In the athletic training profession it is

imperative to find a balance between treating injuries, dealing with the psychological aspect of

an injury, meeting the demands of the coach to return the athlete to play, lack of resources, lack

of support, reassuring the parents and the patient that the best interest of the patient is imperative.

The strain at home from financial demands, lack of support, time constraints, and other stressors

also play a role in this conflict. All of these factors combined or individually may lead to

professional burnout for some athletic trainers.

Theoretical Models

The models that have been deemed most appropriate for this dissertation are Smith's (1986)

model and Kanter's (1993) theoretical framework. Smith's (1986) theoretical model (see Figure 2) was

developed to predict psychological burnout in the helping professions. Smith's (1986) work focused on

coaches and teachers because these professions have a high rate of burnout. This model encompasses a

cognitive-affective map of stress and burnout. This model connects burnout to depersonalization

(Smith, 1986). Depersonalization is the feeling of being detached, a feeling of living in a dream

(Smith, 1986). This map makes the model an appropriate one to use for research regarding

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burnout in athletic training professionals and students because of the similarities among coaches, teachers, and athletic trainers.

Kanter's (1993) theoretical framework (see Figure 3) has also been utilized in many healthcare professions. Kanter (1993) believes that the workplace attitudes and behaviors are the key factors in burnout. When an employee feels the power, are provided an opportunity for growth, and are able to obtain the appropriate resources necessary for job demands, the rate of burnout is lower. Kanter believes that burnout seems to occur when employees feel underappreciated, have limited resources, and lack the time necessary to complete all of the duties of their job. This theory implies that administration creates conditions for work effectiveness by ensuring that employees have access to resources to accomplish their work and are also provided ongoing opportunities for employee development and training.

Research Tools

The Professional Quality of Life (ProQOL R-IV) (Potter et al., 2010), the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981), the Athletic Training Burnout Inventory (ATBI) (Clapper & Harris, 2008), and the Athlete Burnout Questionnaire (ABQ) (Raedeke & Smith, 2004) were used in this dissertation. These tools were utilized because they have widespread use in the research on burnout. While other tools are available, the tools that are examined in this dissertation are those most notable to measure burnout in athletic training. The ProQOL R-IV has been used to survey healthcare providers including nurses, medical assistants, and radiology technicians. This survey was designed to measure compassion fatigue, compassion satisfaction, and burnout. (Potter et al., 2010) Because there are many similarities between the athletic training and nursing professions, this survey was deemed appropriate as a research tool. These similarities include patient interaction, high-stress situations, and interaction with other health care professionals and family members.

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The MBI is a widely used instrument for researching burnout in the helping professions. The MBI was designed to study exhaustion, cynicism, and professional efficacy. It includes three surveys, each with a specific target population. The Maslach Burnout Inventory-Human Services Survey (MBI-HSS) was the original survey designed for professionals in the human services. The Maslach Burnout Inventory-Educators Survey (MBI-ES) was an adaption of the original survey that was used for educators. The Maslach Burnout Inventory-General Survey (MBI-GS) is the newest version and was designed to study the same components but specifically in occupations such as managers, clerks, foremen technicians, and blue-collar workers (Maslch & Jackson, 1981).

The Athletic Training Burnout Inventory (ATBI) and the Athlete Burnout Questionnaire (ABQ) measure similar constructs. ATBI was developed specifically for the athletic training professional using portions of the MBI in the survey. The four constructs developed for the ATBI are emotional exhaustion and depersonalization, administrative responsibility, time commitment, and organizational support. (Clapper and Harris, 2008). The ABQ, which uses scales similar to that of Smith's (1986) theoretical model, measures emotional/physical exhaustion, reduced sense of accomplishment, and sports devaluation (Raedeke & Smith, 2004). Without a doubt, the instruments for burnout exist and show that demands are real in the helping professions as well as for helping profession students.

In brief, many research studies, see Chapter Two, demonstrate that the demands placed on helping professionals and students are the common denominator in the high levels of stress and burnout. In addition, because these helping professions will continue in high demand, the pitfalls of the profession will not be alleviated. The demands of patient care seem to weigh heavily on professionals. In light of this information, steps should be taken to assist students with the necessary techniques and strategies to help reduce stress and burnout before they become professionals. Thus, beginning the process of burnout prevention with the helping profession

students by teaching them techniques and strategies to reduce stress and burnout is appropriate. Certainly, there is a need to help students excel as professionals. Providing techniques and strategies is one way to ensure longevity in the helping professions. This is especially true for the athletic training profession.

The number of jobs that are available for athletic trainers is great. Thus, the future for athletic training remains bright, but the profession also needs to consider athletic trainer job satisfaction and professional burnout as athletic training roles continue to expand (National Athletic Training Association, 2016). The future growth of athletic training relies on knowledgeable and seasoned professionals. However, there is a history of early burnout in the profession; athletic trainers are leaving the profession, resulting in a reduction of practicing seasoned athletic training professionals. This trend, if not addressed, not only exacerbates practitioner shortages but also sets up incoming professionals for dissatisfaction and eventual departure. Therefore, the investigation of burnout and the prevention of burnout should start early in the student's educational process and continue throughout their professional career in order to establish effective strategies for professional growth. Preliminary research on strategies that assist stress management in athletic training students will be a starting point.

This dissertation in practice seeks to investigate the stress and burnout in athletic trainers, specifically in athletic training students. A variety of techniques and tools focusing on stress will be utilized by the athletic training students. Chapter Two will provide important background information and will clearly define burnout and its effects on those in the helping professions. There is a great deal of research regarding burnout within the nursing professions utilizing Kanter's theoretical framework and the Professional Quality of Life Inventory (Kanter, 1993; Potter et al, 2010). As previously stated, because there are similarities between nursing and

athletic training, many of the assumptions made about nursing can also be made about athletic training. These assumptions involve patient care, time dedicated to work, and emotional exhaustion. There has been research on burnout in athletic training regarding educators, clinical professionals, and athletic training students. The use of Smith's model and Kanter's theoretical framework will guide the discussion, study, and implementation of stress reducing techniques in order to reduce burnout in athletic training students. The research that exists about athletic training will be investigated including the following instruments; Maslach Burnout Inventory (MBI) and Athletic Training Burnout Inventory (ATBI). These are utilized to assess burnout in the profession. The MBI has been used in other helping professions which will be discussed in detail later. These professions are similar to athletic training as the athletic training professional is there to provide care to others.

Chapter Three will discuss the methods, participants, tools, and techniques provided, and the instrument utilized in this research. The Athletic Training Student Burnout Inventory (ATSBI) was developed by the researcher. This instrument was developed from the ATBI and the Gallup student poll (Gallup student poll, 2014). Verbal permission was granted fall 2015 by the developer, Dr. Laura Harris, of the ATBI to modify the instrument. The researcher felt some adjustments in wording needed to occur to better define the level of the student perception on the question versus the professional perception. The undergraduate athletic training students took the ATSBI prior to being exposed to any tools and techniques for stress reduction. The first semester the students were exposed to stress reducing techniques. At the beginning of the second semester, the students were administered the ATSBI. The second semester the students were not only exposed but were expected to utilize stress reducing techniques. A post-implementation ATSBI was then taken upon the completion of the semester one and two of implementation.

Chapter Four will feature the results that were obtained with the implementation of stress reducing techniques in athletic training students. The results from the first-semester implementation will be discussed in detail. The second-semester implementation was utilized to create more student accountability. The final results compare the initial ATSBI to the second semester ATSBI. The students will also provide written feedback on a weekly basis which will also be deciphered in the results. This will help to evaluate if the implementation of information on stress reduction and a focus on student accountability utilizing stress reduction techniques are effective in the burnout prevention of the athletic training student. This will assist students in burnout prevention as they become an athletic training professional.

Chapter Five of the dissertation in practice will consist of a discussion of the future of athletic training and ways to assist in the prevention of burnout in the athletic training student and athletic training professional. The athletic training student will also be affected by the future of athletic training. The athletic training student will help to shape the profession and health care in general so it is important that interventional strategies are created to prevent burnout. The information in this dissertation in practice will show that the demands placed on professionals and students are the common denominator leading to a higher level of stress and burnout.

The purpose of this dissertation in practice is to investigate if the implementation and/or accountability of time management, organization, and stress reducing techniques and tools decrease the likelihood of burnout in undergraduate athletic training students.

CHAPTER TWO: LITERATURE REVIEW

History of Athletic Training

The first modern-day recognition of athletic training is discussed in the text *Dropping the Bucket and Sponge a History of Early Athletic Training 1881-1947* which explains athletic training from the years 1881 to 1947 (Weber, 2013). Athletics started to become more organized after the Civil War and became more prominent in colleges at that time. When athletes were being treated for injuries that prohibited their play, there were people who would take care of these athletes. This is where the term athletic trainer evolved from in the early years. From its simple beginnings, athletic training helped achieve many changes in college athletics and the health of the players. Most medical professions started as internship or apprenticeship programs. In the 1800s physicians learned by following another physician in an apprenticeship route. This educational training was similar for athletic training until 1960 when the National Athletic Trainers' Association (NATA) started approving curriculums which provided athletic training educational programs (Weber, 2013). Athletic training, like other health care professions, relies on research and practicing in accordance with that research allows the profession to advance. "The knowledge must have creators (researchers) and consumers (practitioners)" (Weber, 2013, p. 12) that help to promote advancements in medicine.

There are many individuals that are recognized as the pioneers of athletic training. These men were also known as "coach" or a "rubber" due to the tasks that they performed. They assisted the athletes in achieving goals and helped them with athletic pursuits. They were known as "rubbers" because of the massages that they performed on a regular basis for athletes, either pre- or post-game. (Weber, 2013) In 1938 the profession of athletic training was listed in the United States Department of Labor's official Dictionary of Occupation Titles.

This definition describes the athletic trainer (AT) as one who prepares or conditions a person or persons for a particular athletic event, such as baseball, boxing or football; regulates hours of sleep, exercise, and diet; oversees and prescribes types of exercise during the training period; massages muscles by giving a rub-down after the work-out period to relieve muscular strain. (Weber, 2013) These professionals followed the best practice at the time but in today's world, many of these practices would not be acceptable. Harvard was the first school to have an athletic trainer for the football team. Shortly after many other institutions realized the value of the athletic trainer and followed suit by hiring athletic trainers (Weber, 2013).

The National Athletic Trainers' Association or NATA is the professional membership association for certified athletic trainers and others who support the athletic training profession. The NATA originated prior to WWII. The organization began to quickly lose members due to active duty in the war and the association was dissolved. The NATA was reformed in 1950. Formal athletic training educational programs started to develop in 1959 (Delforge & Behnke, 1999). This implementation started with only a few colleges and universities that chose to develop a curriculum for their athletic training program. The first official undergraduate athletic training educational program was recognized by the NATA in 1959. It was in the late 1960's that graduate athletic training educational programs started to develop, the first being recognized and approved by the NATA in 1972. In 1967 The American Medical Association's Board of Delegates (AMA) officially recognized athletic training as a profession (Weber, 2013). There were many problems that held the profession back and prevented growth in the membership and in the profession. These problems included: financial struggles, unfavorable working conditions, difficulty in entering the profession, and the lack of a certification for professionals. Physical therapy counterparts had

a certification examination and the athletic trainers saw many advantages in having such a certification. (McLean, 1999; National Athletic Trainers' Association, 2015) The association realized that a certification was needed in order to credential the professionals that were gaining educational experiences. The certification exam was instituted in 1970 by the NATA. This exam created a standard credential for the certification of athletic trainers. Students who wished to become certified had multiple options at that time; be a graduate from a NATA approved program, complete an apprenticeship program, graduate from a school of physical therapy, or engage as an athletic trainer for a minimum of five years. (National Athletic Trainers' Association, 2015) These steps were imperative for athletic training to become a profession. The credentialing process has changed to date. One now needs to graduate in athletic training from an accredited university in order to sit for the certification exam. In the educational process, there are also competencies that need to be completed to prove proficiency or competence as an entry-level athletic trainer. When athletic trainers became a credentialed health care professional public recognition and the recognition and respect of other health care professions developed. (Delforge & Behnke, 1999; Ebel, 1999) This recognition continues to be a struggle today as athletic trainers seek acceptance as a competent health care professional. This acceptance continues to be one of the primary goals of the NATA. (National Athletic Trainers' Association, 2015)

Clinical education is a vital part of athletic training (and all health care professions) in developing that kinesthetic practice to complement the students' didactic learning. Athletic training students spend approximately 53% of their time in clinical experiences (Delforge & Behnke, 1999). The clinical experience assists the students by applying knowledge that they are learning in the classroom to a clinical setting with a patient or client. The students are also able

to practice hands-on techniques to enhance skills and confidence. The development of clinical education started in the 1950's and was formally developed in 1970. The clinical experience has changed from a basic level of helping out the professional to having to obtain certain requirements during their experience. During the time the students are in their clinical experience they are expected to perform clinical competencies that contribute to the preparation and education. The student is expected to be directly supervised by a professional (who is an ATC or other certified health care professional). The experience for the student should be with athletic trainers as well as other health care professionals in a variety of settings. The expectation increases the experience in a variety of settings has changed from the inception. Originally the students were in clinical settings that were athletic related, now students are able to have and expected to have experiences outside of the athletic realm. The growth of athletic training recognizes that students will be expected to work in a variety of settings and thus should obtain the experience in each of these potential settings (Delforge & Behnke, 1999; National Athletic Trainers' Association, 2015; Weber, 2013).

Current Description of Athletic Training Education

The current structure of athletic training educational programs varies from a bachelor's degree to a master's degree. The mode and method of delivery will also vary. However, the end result with either degree remains the same, passing the certification exam. The Athletic Training Program needs to be accredited by Commission on Accreditation of Athletic Training Education (CAATE) for the student to be eligible to sit for the certification exam and become a certified athletic trainer. Both degree routes are to educate and train the students to become entry-level athletic trainers. (Commission on Accreditation of Athletic Training Education, n.d.) The programs are required to teach the students in accordance with the five domains of athletic training

professional practice. These domains are injury/illness prevention and wellness protection, clinical evaluation and diagnosis, immediate and emergency care, treatment and rehabilitation, and organization and professional health and well-being. (Board of Certification, 2015) The NATA Professional Education Council (PEC) has identified eight content areas regarding athletic training education. The content areas include 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, professional development and responsibility (National Athletic Trainers' Association, 2015). Within the content areas are 219 competencies. These competencies must be instructed and evaluated per accreditation guidelines. Upon completion of the degree, the student will then take a certification exam in order to become a certified professional. This exam is delivered by the Board of Certification (BOC) and will earn the student the credentials ATC (Certified Athletic Trainer) (Board of Certification, 2015). Upon receiving the ATC credential, the professional will then have to obtain licensure or registration in the state of practice. States will vary on the specific requirements with most states having the requirement to obtain either a license or registration in the state. The specifics on the requirements will vary state to state and will depend on the practice act for athletic training in the state (National Athletic Trainers' Association, 2015).

There have been studies that researched what is best for athletic training programs in terms of success on passing the board of certification exam on the first attempt (Williams & Hadfield, 2003; Harrelson, Gallaspy, Knight, & Leaver-Dunn, 1997; Leone, Judd, & Colandreo, 2008; Platt, Turocy, & McGlumphy, 2001). Williams and Hadfield (2003) have studied the characteristics of athletic training programs and the success on the Board of Certification

(BOC) exam. It was discovered that when programs focus on the competencies, had a variety of clinical sites for the students, and required more faculty to have terminal degrees there was a higher percentage of first-time pass rate on the BOC when compared to programs that did not have the same characteristics (William & Hadfield, 2003). Leone et al. (2008) discovered when more faculty held a terminal degree the program was able to obtain more resources from the University. The grade point average (GPA) of the students has been studied on multiple occasions. Platt et al. (2001) and Harrelson et al. (1997) used GPA as a predictor of success in health care programs. Both studies revealed that if the program requirement for admittance included a higher GPA the students were then more successful in passing the certification exam on the first attempt compared to programs that had a lower GPA or no GPA requirement. It was determined from both of these studies that GPA should indeed be utilized as a predictor of first-time pass rate for students in health care programs. Williams & Hadfield, however, found no correlation between the GPA of the student and the first time pass rate for the BOC. This study was specific to athletic training programs while the other studies involved generalized health care programs (Williams & Hadfield, 2003).

Burnout

Burnout has been a topic of conversation in the athletic training profession for many years. There have been many research articles regarding the burnout in athletic trainers due to a variety of factors (Capal, 1986; Hendrix, Acevedo, & Hebert, 2000; Kahanov & Eberman, 2011; Schaufeli, Maslach, & Marek, (Eds), 1993). Many of these factors are consistent with other health care professions. A number of researchers have suggested that burnout is the main reason for professionals to leave the athletic training profession (Capal, 1986; Hendrix, Acevedo, & Hebert, 2000; Kahanov & Eberman, 2011). This is an important topic of discussion. As a

profession, there should be safeguards to help prevent burnout. Typically a higher rate of females leave the profession due to family life and the inability to maintain the hours and time commitment that is required in the athletic training profession. (Kahanov & Eberman, 2011)

Burnout involves more than just working long hours. There are several other features that contribute to physical and mental signs that are associated with burnout. These characteristics can impact with one's general health, relationships with others, happiness, and job performance. Burnout first emerged as a social problem (Capal, 1986; Hendrix, Acevedo, & Hebert, 2000). The initial concept of burnout was shaped pragmatically and not with academic concerns. The focus was on obtaining a clinical description of burnout. Later the focus shifted to empirical research and focused on systematic research, in particular on assessments. Throughout this initial process, there was an increase in theoretical development of burnout. The first articles to discuss burnout appeared in the mid 1970's and provided an initial description of the burnout phenomenon and attaching a name to what people were experiencing. As the research developed it was discovered that professionals in the human service fields were at a higher risk of developing burnout (Schaufeli, Maslach, & Marek, (Eds) 1993). The two areas that were investigated early on included the relationship between a provider and the patient or recipient of the particular services, and the delivery of service, care, or education. Both of these factors can be disturbed with emotional strain (Schaufeli, Maslach, & Marek, (Eds) 1993).) The early characteristics of burnout were described using a variety of definitions. Authors had their own interpretation of burnout; concepts of burnout had expanded to cover everything as burnout. This included items that were associated with workload or midlife crises. Most articles were non-empirical and involved personal experiences (Kanter, 1993). The lack of articles having empirical data and information was due to clinicians producing the research and not academic

scholars (Kanter, 1993). The emphasis on job factors has been the main focus of the research on burnout as it has developed. The concern with the research on burnout is that early on, burnout was defined when people experience job-related stressors, depression, emotional exhaustion, or dissatisfaction and not when they are experiencing true burnout. The many specific definitions of burnout are vast. A review of the definitions reveals there are five common themes: emotional exhaustion, depersonalization, time commitment, organizational structure, and role strain. There are numerousness listings of symptoms: mental, emotional, fatigue, and depression. The concentration is on mental and behavioral symptoms rather than physical; which are associated with work; displayed in normal people who did not experience previous psychological symptoms; reduced work performance due to negativity (Schaufeli, Maslach, & Marek, (Eds) 1993).

In the early 1990s scholars developed the Conservation of Resources (COR) theory to describe the process of burnout and the stress that was associated with the organizational setting. This theory establishes that people have a will to create, conserve, foster, and protect their resources that are key to survival. According to the COR theory, stress occurs under three conditions: when an individual's key resources are threatened or lost; when resources are lost; or when individuals fail to gain resources following significant resource investment (Gorgievski & Hobfoll, 2008, .p.2) The COR theory is a motivational theory. Individuals are trying to maintain and protect their resources. The resources the individual will be protecting have an intrinsic value, including objects (car or house), conditions (parenting), personal resources (personal skills), and energy resources (Gorgievski & Hobfoll, 2008, p.4). According to this theory, people change as to adapt to the specific circumstances that they are experiencing. The goal for an individual is to obtain a life of complete homeostasis. In regards to burnout the COR theory

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nurtures a commitment to avoid burnout. Building commitment to the work or employer follows the ideas of Kanter's theoretical framework where the nurturing of relationships, resources, and security will gain the positive attitude and engagement in the work setting. The individual needs to contribute to this nurturing environment in various ways which include: being flexible; having a balance; being diverse; having independence, loyalty, and tolerance for risk and failure (Gorgievski & Hobfoll, 2008).

Measurement of burnout

As discussed previously, there are a few different instruments that are utilized to measure burnout. These vary depending on the profession. The instruments that will be researched and defined in this dissertation include the Smith's Model, Kanter's Theoretical Framework, Maslach Burnout Inventory (MBI), Athletic Training Burnout Inventory (ATBI), Professional Quality of Life (ProQOL R-IV), and the Athlete Burnout Questionnaire (ABQ).

Smith's Model (figure 2) is a cognitive-affective model of stress and burnout in athletics. The main items in Smith's model include physiological, cognitive, and depersonalization. Physiological is the physical state of the body, which includes emotions. Cognitive is the mental state of the body. Depersonalization is the feeling of being detached, a feeling that you are living in a dream (Smith, 1986). Kanter's theoretical framework (figure 3) encompasses a positive environment. This theory relies on the work place having a positive vibe with opportunities for growth for their employees. Kanter's theory can also be utilized with students as well. The three main focuses of Kanter's includes power, opportunity, and social interactions. Power is one's ability to control their situation and life at work. Opportunity is the ability to advance within the organization. Social interactions are having social connections with fellow employees (Kanter, 1993). The MBI includes three constructs; emotional exhaustion, depersonalization, and personal

accomplishment. Each of these constructs plays a role in burnout. Emotional exhaustion is a physical symptom that burdens the body. Depersonalization is the feeling of being detached from one's life and surroundings. Personal accomplishment will be lessened due to the feeling of burnout, the person will not have the satisfaction they once did helping people (Maslach & Jackson, 1981). The ATBI is an instrument that was developed from the MBI and tailored specifically for the athletic training professional. There are four constructs instead of three; emotional exhaustion and depersonalization, administrative responsibility, time commitment, and organizational support. Emotional exhaustion and depersonalization were combined for this instrument. Administrative responsibility is included because the athletic training professional has a variety of responsibilities. This construct included the stress to complete the administrative responsibilities for the professional. The time commitment is the time demands that the job places on the professional's life and the extra time on the job may hinder other tasks or relationships in their life. Organizational support is similar to that of Kanter's theoretical framework. The employee must feel as if they are valued within the organization (Clapper & Harris, 2008). According to Kanter the more an employee feels valued the more satisfied the employee is with their job (Kanter, 1993). ProQOL R-IV is an instrument for burnout that is mainly utilized in the nursing profession. This original 33 item questionnaire measures compassion fatigue, compassion satisfaction, and burnout. Compassion fatigue results in decreased job satisfaction, more sick days, and decreased productivity (Potter et al, 2010). The ABQ is a questionnaire that consisted of four constructs: Perceived Stress Scale (PSS) (12 items), General Coping Behaviors (12 items), Social Support Satisfaction (six items), and Burnout (14 items) (Raedeke and Smith, 2004). All of these instruments will be explained individually in this chapter.

Smith's Model

Smith's Model encompasses a cognitive-affective model of stress and burnout in athletics. Stress is one of the main factors for burnout in AT professionals and the athletic training students. Smith defines burnout as psychological, emotional, and physical withdrawal from a previously enjoyable activity. Physiological symptoms include irritability, fatigue, sleep problems, exhaustion (loss of energy or interest), and decreased performance. Cognitive symptoms include feelings of failure or depression and lowered self-esteem. Depersonalization is detachment from the sport and a feeling of "why am I doing this"? and devaluation when the subject no longer finds any worth in the activity. Smith also found that when depersonalization is a more common trait in coaches and teachers; athletes tend to devalue the activity they are being asked to perform. Smith's model is a four stage model of stress and burnout and is comprised of situational demands; cognitive demands against personal resources which are the perceived ability to meet demands; and the psychological responses and behavioral responses which are coping behaviors (Smith, 1986).

The examination of athletic trainer burnout in Division I-A Universities was studied in depth to review relationships that were predicted by utilizing Smith's Model (Figure 2) (Smith, 1986). Smith's Model encompasses the psychological, emotional, and physical removal from one's disposition. The enjoyment is removed from the particular activity or setting resulting in burnout. Personal and situational variables to perceived stress and also the relative impact of perceived stress on three burnout factors (emotional exhaustion, personal accomplishments, and depersonalization) were analyzed (Hendrix, Acevedo, & Hebert, 2000). This study found that emotional exhaustion is the main cause of burnout due to the feeling of loneliness, depression, fatigue, and feeling overwhelmed. The results from this research indicated

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that the older professional and the female professional typically have higher scores on Smith's scale (Hendrix, Acevedo, & Hebert, 2000). Personal accomplishment has been closely related to the stress level of the professional. Those that have a higher level of personal accomplishment are found to be more satisfied with their job. Athletic trainers show a higher level of personal accomplishment than other professionals that have been studied (Hendrix, Acevedo, & Hebert, 2000). Depersonalization also has a significant relationship to stress. Athletic trainers are higher in this area which relates to a higher burnout rate. The number of athletes that the athletic trainer interacts with on a daily basis and the long hours play a role in the depersonalization score (Hendrix, Acevedo, & Hebert, 2000). The survey that was utilized was one that has been used in many research studies regarding coaches and coaches who teach and their specific burnout. When comparing the scores of the coaches to the Certified Athletic Trainer's (ATC), the ATC's scored higher on the hardiness scale and lower on the perceived stress and personal accomplishments. The specifics of this study including the hardiness, stress, and personal accomplishment scores exposed within the correlation analysis were all consistent with the Smith's model research that had been conducted earlier (Hendrix, Acevedo, & Hebert, 2000). The results show that athletic trainers are similar to the coaches in their scoring. This comparison makes sense because the time spent each day with the team is going to be roughly the same. Both professionals have the extra prep work and post work that is involved in caring for the athletes and ensuring that the athletes are competing at optimal levels. The author is interested to see if Smith's model would have consistent results when surveying athletic trainers in a variety of settings. There are many factors that contribute to burnout and stress that athletic trainers deal with in all settings. Further analysis is needed across the profession to assist not only the professional but also the profession. The quality and numbers of athletic trainers will

continue to diminish, especially those that are seasoned professionals if burnout in the profession is not addressed (Hendrix, Acevedo, & Hebert, 2000).

Additional research supporting Smith's model has been completed in different professions with results being similar to that of the athletic training profession and consistent with the information produced by Smith (1986). The profession and the demands of athletics, specifically athletic directors, is closely related to those of athletic trainers. A study by Martin, Kelley, & Eklund (1999) based on Smith's (1986) theoretical model investigated stress and burnout in athletic directors. This theory expects stress predictors to directly influence burnout specifically through stress. The results found that athletic directors who had a tendency to become stressed with career issues and were low in hardiness experienced an elevated level of stress and burnout. The athletic directors also endure greater levels of emotional exhaustion compared to depersonalization and personal accomplishment. The influence of stress was the common denominator. The demands that are placed on this professional on a daily basis with managing various activities and a large population increase the stress level of this professional (Martin, Kelley, & Eklund, 1999). The results also describe a significant importance in hardiness and the workplace can have a direct influence on burnout. The environment that one is practicing in and the demands placed on the individual adds stress which can be directly linked to burnout for the professional. The lack of control over various situations causes an increase of workplace stress. One finds themselves with little control over situations and at times little empowerment (Martin, Kelley, & Eklund, 1999).

Personality and motivational factors

Stress

Situation demands
and resources

Cognitive appraisal

of demands
of resources
of consequences
of "meaning" of consequences

Physiological
responses

Coping and
task behaviors

Burnout

High or conflicting
demands: overload

Low social support

Low autonomy

Low rewards

Low demands
(boredom)

Perceived overload

Low perceived predictability
and control: helplessness

Perception of few meaningful
accomplishments

Lack of meaning and
devaluation of self-activity

Tension, anger,
anxiety, depression

Insomnia, fatigue

Illness susceptibility

Rigid, inappropriate
behavior

Decreased
performance

Interpersonal
difficulties

Withdrawal
from activities

Personality and motivational factors

Adapted by permission from Smith 1986.

Figure 2. Smith's Model (Smith, 1986)

Kanter's Theoretical Framework

According to Kanter workplace attitudes and behaviors are key factors in burnout.

When employees feel power, are provided an opportunity for growth and are able to obtain the

appropriate resources necessary for job demands the rate of burnout is lower. Burnout seems to

occur when employees feel underappreciated, lack resources and the time necessary to

complete all duties of their job. This framework is used in many health care professions.

Power can be derived formally or informally. Formal would include jobs that are visible, have a

purpose to the company, and allow the employee some decision making power. This

description would include the athletic trainer and the duties they perform on a regular basis.

The informal power would include alliances that the employee has within the organization with either directors or peers. If these people allow the employee to excel and feel empowered with a sense of growth and development there is likely to be a higher sense of satisfaction. Kanter's work also describes three organizational structures that may influence the effectiveness of work; power, opportunity, and social interaction. The structures include access to information, resources, support, and the opportunity to learn and grow. Kanter's theory mandates that administrators create conditions for work effectiveness by ensuring that employees have access to accomplish their work and are provided ongoing opportunities for employee development. These resources are both formal and informal. Kanter upholds that out of all of the structures, the opportunity is the key. If employees have the opportunity to be successful and advance within the organization, the employee has a higher level of satisfaction as well as productivity (Kanter, 1993). The results of the nurse administrators and staff nurses were consistent with the research that states when the opportunity exists there will be empowered employees which will carry over into the work environment and essentially lead to reduced burnout (Spence Laschinger, 1996).
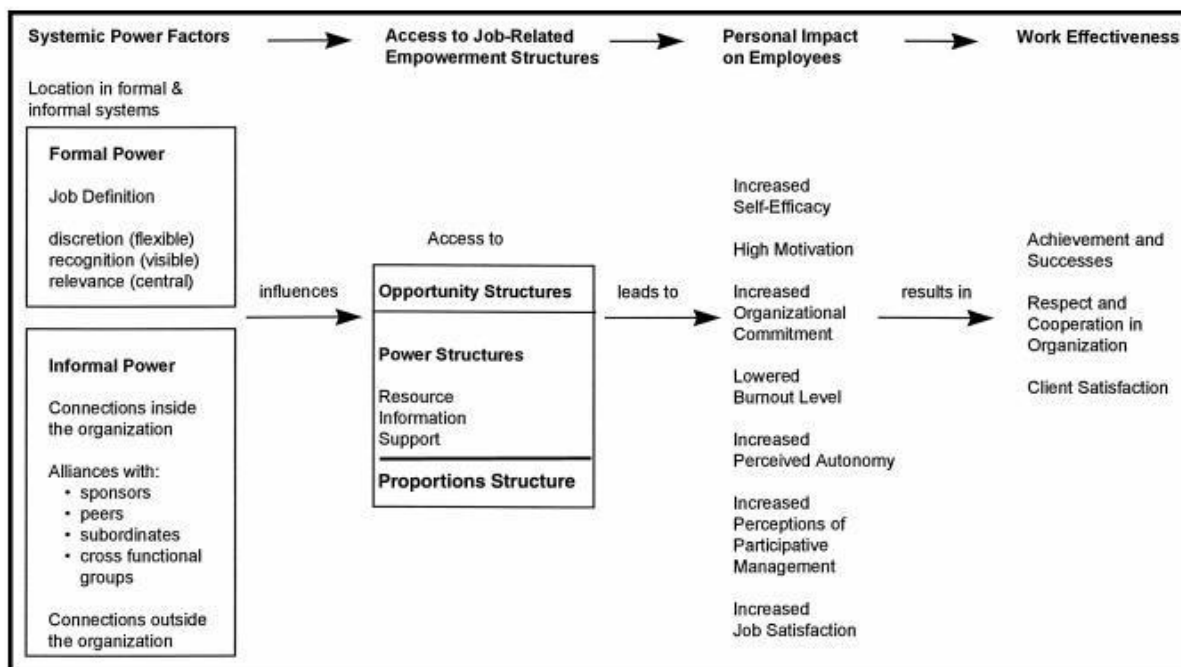
Figure 3. Kanter's theoretical framework (Kanter 1993)

Pitney's study involved the quality of life issues that stem from Kanter's theoretical framework. In this study organizational influences and quality of life, issues were investigated for athletic trainers working in division I collegiate setting. While dealing with the rigid tendencies at the university and the diminished quality of life, the professionals were able to maintain a high quality of health care services to the student-athletes. The consistency of life balance was discovered in this study which is found among other studies listed here. The professional needs to be aware of strategies to have a life balance to ensure that burnout does not occur (Pitney, 2006).

Maslach Burnout Inventory (MBI)

According to the sixteenth Mental Measurement Yearbook (2005), the MBI has been proven to be reliable and valid over time (Spies & Plake (Eds), 2005). This particular instrument has been referred to as the gold standard for assessing burnout. The authors of the MBI define

burnout as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity" (p. 4). The original version of the MBI is specific to those individuals in the human service field, this version was labeled MBI-HSS (human service survey). This instrument uses a 22 item survey that has three scales: emotional exhaustion, depersonalization, and personal accomplishment. The second version is labeled MBI-ES (educator's survey). The scales that are used in MBI-HSS are also used in the MBI-ES. The difference between the two surveys consisted of wording changes, the MBI-HSS addresses the human service professional and those patients that they assist, the MBI-ES deals with educators and the students they taught. The third survey that was developed was labeled MBI-GS (general survey). Along with this new version of the MBI, the authors also developed a new definition of burnout. This definition states burnout as "a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's ability to perform" (p. 20). This was developed for those who did not fall into the human services or educator categories. This survey contained 16 items and eliminated the recipient terminology, as the MBI-HSS involved the patient as the recipient and the MBI-ES involved the student as the recipient. The MBI-GS was designed to focus on the relationships with people at work. The three scales that are used are exhaustion, cynicism, and professional efficacy. The responses for all of the surveys are used to define the specific individuals' feelings on burnout. All of the versions use a Likert scale ranging from 0 (never) to 7 (every day) (Maslach & Jackson, 1985; Spies & Plake (Eds), 2005).

The test-retest method was utilized to prove the reliability of the instrument. The Cronbach alpha scores for the MBI-HSS consisted of .90 for emotional exhaustion, .79 for depersonalization, and .71 for personal accomplishment. There were variances in the scores of the

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test-retest coefficient depending on the time frame of the retest whether it was within a few weeks or up to a year. The Cronbach alpha scores were highest when the retest occurred within a few weeks of each other. When retesting beyond a few weeks, scores consisted of .82 for emotional exhaustion, .60 for depersonalization, and .80 for personal accomplishment; over three months scores were .75 for emotional exhaustion, .64 for depersonalization, and .62 for personal accomplishment; up to one year .60 for emotional exhaustion, .54 for depersonalization, and .57 for personal accomplishment. The correlation coefficients were found to be moderate to low (the closer the number is to +1 or -1 the stronger the relationship, either positively or negatively), emotional exhaustion with depersonalization was .52 and with personal accomplishment a -.22. The correlation between depersonalization and personal accomplishment was -.26. The Cronbach alpha scores for the MBI-GS were higher than the other two instruments; exhaustion .89, cynicism .80, and professional efficacy .76. A positive correlation between exhaustion and cynicism (.48) was measured. The correlation in professional efficacy correlated negatively with both exhaustion (-.23) and cynicism (-.44). Validity was established and indicated using a correlation of outside observers, utilization of job characteristics that cause burnout, and the measurements of several products that hypothesize burnout. The validity was found to have similar patterns of correlation as the MBI-HSS and the MBI-ES were found in the MBI-GS. The face validity was reviewed in the MBI-GS but is lacking validity support as this is a newly developed instrument. The MBI-GS being new has positive reviews but will need to be vetted in more depth to have the proven reliability and validity (Maslach & Jackson, 1985; Spies & Plake (Eds), 2005).

The MBI is the instrument used most frequently to assess burnout in human service professions. Professions such as athletic training, nursing, general surgery education, and dental education are professionals which have been assessed using this instrument. The

variables of emotional exhaustion, depersonalization, and personal accomplishment, which were analyzed in this instrument are similar to Smith's model. In research produced by Maslach, it has typically shown women to experience an increase in emotional exhaustion over men and men experience an increase in depersonalization. Walter, Van Lunen, Walker, Ismaeli, and Oñate (2009) utilized the Maslach Burnout inventory in surveying undergraduate athletic training program directors. The results showed that the program directors had moderate levels of burnout in emotional exhaustion, low levels of burnout in depersonalization, and low levels of burnout in personal accomplishments. The women reported higher emotional exhaustion but there were no gender differences in the other two categories of depersonalization and personal accomplishment. The tenure status, which means they have a permanent place with that employer, only affected the emotional exhaustion as it was higher in the non-tenured participants. This elevation of stress may be due to job security that comes with tenure positions. Increased stress may also be related to the time constraints and demands to produce research necessary to attain the tenure position. The older the program director was, the lower the emotional exhaustion and depersonalization scores were in this survey. There was a correlation when the emotional exhaustion scores increased, the depersonalization scores generally increased, and when the personal accomplishment scores decreased so did the emotional exhaustion and depersonalization scores. A trend was identified that describes a positive relationship between increased experience with reduced emotional exhaustion and increased feelings of personal accomplishment. The Carnegie classification was also used to analyze the research results. The Carnegie classification is the framework surrounding higher education to classify institutions into categories using educational and research components in order to compare like institutions. This classification was used in this

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study comparing institutions with a lower classification (less research agenda) to those with a higher classification (a higher research agenda with more advanced degrees being produced). The results found no effect on burnout with a higher classification. This may be because the institutions may provide the faculty with additional resources or release time to perform their research duties (Walter, et al., 2009). Riter, Kaiser, Hopkins, Pennington, Chamberlain, and Eggett (2008) also utilized the MBI in surveying undergraduate athletic training students in an athletic training program. The variables were consistent with the Walter et al (2009) study. The results indicated that students who were closer to graduation had significantly higher depersonalization and emotional exhaustion scores than any of the other students. Females displayed a higher level of emotional exhaustion than their male counterparts. The results of both of these surveys are similar even though one surveyed professionals and the other surveyed students (Riter et al, 2008; Walter et al, 2009).

There have also been studies performed to assess the burnout in undergraduate athletic training students. One particular study focused on a Commission on accreditation of athletic training education (CAATE) accredited athletic training program at an undergraduate university. The instrument that was utilized for the students was the Maslach Burnout Inventory-Human Services Survey (MBI-HSS). The variables that were analyzed consisted of emotional exhaustion, depersonalization, and personal accomplishment. This is similar to the instrument that was utilized in detecting burnout in program directors by Walter et al and also Smith's model by utilizing the same variables. The participants were given the survey multiple times over the course of the semester to assess how the student is feeling at different times during the semester. Students who were closer to graduation had significantly higher depersonalization and emotional exhaustion scores than the other

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students. There was only a moderate level of significance for the same group of students in the personal accomplishment scores compared to the other students. This correlated with a beginning category of burnout and not a high-level category. The score must be high in all three areas in order for the students to be classified as having a high level of burnout. Females in the study displayed a higher level of emotional exhaustion than their male counterparts. This was similar to the results that were found in the survey of the program directors. The students were surveyed on their clinical assignments, this is when the student follows a professional in their setting. This experience allows the student to gain experience and knowledge to enhance their education and confidence as a professional. When the clinical assignments were assessed for the student in regards to burnout the results showed a moderate amount of burnout. (Riter et al., 2008)

When considering burnout both positive and negative social interactions occur and should be considered when examining the relationship among athletic trainers in their health and wellbeing. Positive work experiences include engagement and job satisfaction and negative work experiences include burnout. As an athletic trainer the professional deals with both social and job-related demands on a daily basis. Social interactions include those of athletes, coaches, administrators, and athletic training students. The burnout definition is consistent with most articles: a psychological cognitive-affective syndrome that is driven by work-based perceptions of three dimensions: emotional exhaustion, depersonalization, and the reduction of personal accomplishments. Emotional exhaustion represents mental fatigue and emotional distance from one's work. Depersonalization represents distancing oneself from the patient, clients, or athletes. Personal accomplishment is when a person finds their job satisfying, a low score represents a lack of job-related usefulness. The duties that athletic

trainers face from patient care to administrative and supervision to preventative and

rehabilitative care for those that are injured can create significant stress and try to balance

these factors effectively can be challenging. (DeFreese & Mihalik, 2016) According to Kania,

Meyer, and Ebersole (2009), there are 30% of athletic trainers that experience burnout with

females having a higher percentage than men (Giacobbi, 2008; Kania, Meyer, & Ebersole,

2009). Capal (1986) concluded that workload, role conflict, and control are the major factors

for burnout in the athletic training profession. DeFreese found in a survey utilizing the MBI-

HSS, perceived stress scale, social support questionnaire, and positive and negative social

exchanges that work-based perceived stress, increased workload, and negative social

interactions play a large role in the burnout of athletic trainers. Data revealed low to moderate

levels of mean emotional exhaustion, depersonalization, and global burnout and moderate to

high levels of personal accomplishment. Burnout and the other dimension scores were

consistent with other burnout literature (Capal, 1986; DeFreese &Mihalik, 2016).

Athletic Training Burnout Inventory (ATBI)

The Athletic Training Burnout Inventory (ATBI) was developed by Clapper and Harris

(Clapper & Harris, 2008). The instrument was based on the Maslach Burnout Inventory-Human

Service Survey (MBI-HSS) and reworded to specifically address the terms utilized in athletic

training. The instrument was developed utilizing 18 items from the MBI-HSS and 45 new items

addressing burnout and workload issues that are specific to the athletic training profession.

Personal achievement was not addressed in the ATBI but the level of organizational support

and demands were measured. The instrument was developed to research burnout in athletic

trainers employed at various NCAA Division I-A athletics programs. The instrument was

modified from a three construct instrument (emotional exhaustion and depersonalization,

level of stress, and level of organizational support) to a four construct instrument (emotional

exhaustion and depersonalization, administrative responsibility, time commitment, and

organizational support) (Clapper & Harris, 2008). The additional construct was used to assist

the researchers in establishing wording that coincides with the work of the athletic training

professional. During the development of the instrument, it was tested for reliability and

validity. Reliability was analyzed and established by utilizing two pilot tests using a Cronbach

alpha score of .70 which is a proven score for reliability (Clapper & Harris, 2008). Before the

instrument was used for the purpose of this study it went through two pilot tests, to help with

the proof of validity and reliability. In order to establish face validity, there were six experts

who provided feedback to the researchers regarding the validity of the ATBI. After the

completion of this first pilot test, the scale that was consistent with the MBI was revamped

from 0 to 6 point scale to a 1 to 6 point scale. This was done to keep consistent with the new

questions that were specifically developed for the ATBI (Clapper & Harris, 2008). The second

pilot test established content validity utilizing feedback from 10 experts. The amendments that

took place after this field test were minimal and included wording and sentence revisions. The

Cronbach alpha score was set at a priori level of a .70, this is an acceptable score to prove

reliability. The reliability of the first pilot study revealed a Cronbach alpha score above the

necessary .70 threshold for the emotional exhaustion and depersonalization construct and the

level of organizational support construct. Both of these constructs underwent small revisions

for the final instrument. The level of stress construct produced a low Cronbach alpha, below

.70.

This construct was then split into two separate constructs, administrative responsibility

and time commitment. This construct split resulted in a Cronbach alpha score of .70 for

administrative responsibility but the time commitment was below .70 and required revamping

for the final instrument (Clapper & Harris, 2008). The final version of the instrument revealed a Cronbach alpha of .80 and yielded an 84.4% response rate. The demographics found that the majority of the participants were under the age of 40. The results for each of the constructs revealed no statistical significant difference between sex, marital status, or age except for the organizational support which establishes a statistical significance in age. The results were consistent with other research that has been produced (Maslach & Jackson, 1981; Riter et al., 2008; Walter, et al, 2009).

The ATBI has also been used in surveying Graduate Assistant (GA) athletic trainers in the collegiate setting. The GA will tend to put in a great deal of time working to provide athletic training services to the student-athletes that they work with in addition to the academic workload of their chosen master's degree. The participants included GA's that had travel responsibilities, teaching responsibilities, clinical responsibilities, and those who did not have those extra duties as part of their GA requirements as an athletic trainer and a student. The stress levels of those that had the extra responsibilities of either teaching or traveling were found to have higher levels of stress than those who did not have these responsibilities. The GA's that worked in the Division I clinical setting were found to have a higher number of hours worked compared to those working in Division III clinical setting and those working in a high school setting. Graduate assistants are indeed on the path to burnout. The extra demands of administrative duties, time commitment, and academics show that burnout will be more likely. There is a higher need for stress management in Division I Universities as research has shown there are higher demands placed on these individuals and more role strain when compared to lower division universities (Mazerolle, Monsma, Dixon & Mensch, 2012).

Other instruments for burnout

The Athlete Burnout Questionnaire (ABQ) is a burnout questionnaire geared towards the athletic population. The ABQ uses scales similar to that of Smith's model; emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation. The final version was indicated as valid following a validation study. Reliability of the study was also proven with a Cronbach alpha score .84-.88. The path that leads to burnout included stress, coping, and lack of social support. The research supports that stress is as prevalent in athlete burnout as it is with athletic trainer burnout (Raedeke & Smith, 2004).

When comparing burnout in the athletic training profession to other health care professions, there are several noteworthy articles including many from the nursing profession. One particular study analyzed the profession of oncology nursing. The study investigated the variable compassion fatigue and how that played a role in burnout. The instrument used in this study was the Professional Quality of Life (ProQOL R-IV). Potter et al investigated the nursing profession and utilized the (ProQOL R-IV) to survey registered nurses. The inpatient staff had a higher burnout rate than the outpatient staff. The amount of time the staff spent with a patient seemed to correlate with burnout. The conceptual framework utilized in this study concluded that overload also contributed to burnout noting when there was an imbalance between job and personal demands the rate of professional burnout increased. The categories that were reviewed were compassion fatigue, compassion satisfaction, and burnout. Most of the participants surveyed were Registered Nurses (RN). Burnout was associated with increased stress from the demands of a variety of different sources; daily life, physical demands, and emotional and mental exhaustion. The results showed that the staff with six to ten years of experience had the highest percentage of burnout. The inpatient staff had a higher percentage of burnout than that of the outpatient staff.

Those professionals that are dealing with a grave disease or sickness tend to carry a lot of the stress for their patients which translates into professional burnout. The nurses with advanced degrees had a higher percentage of burnout than their counterparts with only an associates or bachelor's degree. The amount of stress and the amount of time spent with the patient seems to also correlate with the level of burnout. The amount of time spent is important because patient care and the quality of care is questioned when professionals suffer burnout (Potter et al., 2010). The conceptual framework utilized in much of the nursing research regarding burnout contains theories that work overload contributes to burnout when there is an imbalance between job and personal demands. Other key points to consider are job stressors, social support, and employee well-being. According to Kanter (1993), the workplace attitudes and behaviors are key factors in burnout. When an employee feels power, is provided an opportunity for growth, and is able to obtain the appropriate resources necessary for the job demands, the rate of burnout is reduced. Burnout occurs when an employee feels underappreciated and lacks the resources and time necessary to complete all duties of the job. This particular model has been used to create a more empowered work environment in many health care professions (see Figure 2) (Spence Laschinger, 1996).

This theory empowers the practitioner to be more successful in their practice. The actual measurement, however, is challenging due to the fact that empowerment is conceptualized in various ways and thus measured differently.

The research by Mauzy, Bowman, & Mazerolle (2015) involved athletic training programs. An original 33 item questionnaire was used as the instrument of choice in this study. This was to investigate and generalize students in the health care settings that have their students participate in clinical experiences as part of their program requirement. The majority of the stress was focused on the classroom demands, clinical demands, and the stress from their social life. This

research detailed that the athletic training students experience a high sense of stress, frustration, and burnout. This imbalance between patient care experiences and academic duties has been noted with students in medical school, nursing, physical therapy, and athletic training. Mauzy et al surveyed athletic training students from freshman to senior year, both males and females. There were differences between the students in each class when the data was coded to compare the hands-on experience to the balance of academics and clinical responsibilities. As the students go through the athletic training curriculum there are more demands that are placed on the student both in the didactic environment and in the clinical experience. The advancement in knowledge is to enhance their skills to enter the profession as an entry-level Certified Athletic Trainer (ATC). The qualitative survey was an original survey so there was no comparison to other study's previously discussed that utilized the MBI or ATBI, but there are similar results (Clapper & Harris, 2008; Giacobbi, 2008; Kania, Meyer, & Ebersole, 2009; Mazerolle, Monsma, Dixon & Mensch, 2012; Maslach & Jackson, 1981; Mauzy, et al, 2015; Riter et al., 2008, Walter, et al, 2009). The timing of the survey is questionable due to the fact that it was conducted during midterms. This is a time of higher levels of stress for all students regardless of the year in school. During this time frame, most of their classes will have a comprehensive exam that covers all materials discussed at that point in the year. Findings also identified that resources should be dedicated to assisting students with time management skills, communication skills, and defined expectations for all involved in the athletic training program including the students, preceptors, and faculty. These resources would help to create a positive change in the athletic training programs which would enhance the student engagement and learning experience. This is similar to Kanter's theoretical framework (Kanter, 1993; Mauzy, 2015).

The students in the researchers athletic training program did two research projects involving athletic trainer job satisfaction and personal wellness that has not been published. The surveys that were used for both of these projects were the Perceived Wellness Survey (PWS) and the Job Satisfaction Survey (JSS). One group of students surveyed the female athletic trainers in North Dakota. The results of the survey were inconclusive but found most of the participants that responded to the survey were under 30 years of age. This could mean a few things including; that participants are reaching burnout and changing careers before age 30 and/or there are few athletic trainers over the age of 30 working in North Dakota. The survey was not specific to burnout. The other project was surveying both male and female certified athletic trainers in the Mid-American Athletic Training Association (MAATA) District five. The results were inconclusive but found those professionals working in the clinical setting had a lower PWS score and those working in the secondary setting had a lower JSS score when comparing settings.

Stress management

Stress has been researched to some extent. Granath, Ingvarsson, Thiele, and Lundberg (2006) researched both psychological (self-rated stress and stress behavior, anger, exhaustion, quality of life) and physiological (blood pressure, heart rate, urinary catecholamine, salivary cortisol) responses to stress. The Perceived Satisfaction Survey (PSS) was utilized to measure aspects of stress. The PSS is used to measure the amount of stress that is placed on oneself due to life situations. The Quality of Life Inventory (QOLI) which was used to measure satisfaction and importance. The results revealed a decrease in the PSS scores and no change in the QOLI scores.

There is also information provided through websites that were created by practitioners and utilized by practitioners. The website that will provide information for the intervention is

MindTools (https://www.mindtools.com). The stress diary (Appendix I) is one of the interventions that was used from this site. It is important to utilize information that is currently being used for validity purposes.

Prevention

There are many suggestions that have been proposed to help prevent stress and burnout. However, there is more research on burnout and stress than the actual methods of reducing stress and preventing burnout. The methods suggested reducing stress include time management, meditation, exercise, organization skills, communication skills; social skills, and a wellness plan (www.mindtools.com).

Time management is an effective way to manage an individual's day. A daily schedule will assist in laying out a schedule on a daily, weekly, or monthly basis. The schedule can be defined hourly and arranged specifically to include what will occur within the hour and the goals for that hour. Time management will assist in being more productive, effective, and organized while helping to prevent overload. Part of time management can include tools like daily logs, to-do lists, action plans, goal setting, and prioritizing. Goals should be assessed on a regular basis. Tasks that are completed should be removed from the list and new goals should be added to the list. The organization of these lists can range from highlighting and prioritizing tasks according to due dates and priority (www.mindtools.com).

Meditation includes visualization activities and should be relaxing. There are many different types: concentration meditation; mindfulness meditation; and walking meditation to name a few. The methods will depend on what the individual prefers. The goal of meditation is to decrease heart rate which will relax and soothe the body. Meditation can be as quick as 60 seconds or last up to an hour or longer. Along with different methods of meditation, there are also

different techniques and exercises that can be used for meditation. These include breathing techniques, yoga, or tai chi (www.mindtools.com).

Exercise and a wellness plan go hand in hand. A person can do one or the other but for the optimal benefit, the individual should perform them together. Exercise can range from training for a marathon to walking at a slow pace. The goal of the exercise is to increase the heart rate to obtain a physical benefit. Wellness includes many items including nutrition. Many college students do not know the first thing about nutrition. The student who may be on their own for the first time may explore many nutritional options that were not available to them in the previous years. This may include pizza whenever they wish and forgetting that fruits and vegetables exist.

Maslach and Goldberg (1998) state that interventions should be planned and designed surrounding the three components of burnout (emotional exhaustion, depersonalization, and personal accomplishments). These are the same components that the burnout instruments are designed to assess. Increasing engagement should be a high priority in order to prevent emotional exhaustion and reduce burnout. The environment must improve energy, individual involvement, and effectiveness of the employee or the student. The researchers believe that there are certain criteria for prevention which include; elimination of worksite stressors, interventions to assist with these stressors, focus on job characteristics, focus on personal characteristics (changing the person or treating the person), and the utilization of support groups. Many assumptions are that the individual should be the one to change and not necessarily the work environment. Some of these changes are to change work habits, cultivate coping skills, and utilize social resources. The change in work patterns may include reducing the number of hours worked per week, taking regular breaks, not taking extra shifts or overtime, slow down the pace of your work, and maintaining a balance at work. The development of coping skills includes reducing expectations, clarifying values, and

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imaging the next step or a new goal. The sharing of one's emotional feelings, time management, and conflict resolution will also assist in the prevention of burnout. Social support can be a colleague, supervisor, friend, or family. These people are available to discuss issues, receive encouragement, and escape with humor which will all assist in the prevention of burnout. Establishing a relaxing lifestyle will also help offset anxieties. These may include the use of biofeedback, meditation, massage, hot baths, positive interests and hobbies to name a few. Physical fitness and good general health should also be a priority to help keep burnout at bay. The research indicates that good health could help with preventing burnout (Maslach & Goldberg, 1998).

Summary

Many similarities were found in all of the articles regarding burnout. The consistent themes are that females tend to have more stress and burnout than their male counterparts. Depersonalization was low but when using Smith's model, athletic trainers' depersonalization scores were higher than those of the coaches and teachers. The demands that are placed on professionals and students seem to be the common denominator for stress and burnout. Athletic trainers do seem to have a higher sense of accomplishment than others in the health care professions. This may be due to the satisfying work that the students and professionals do for the patient after the injury or illness in assisting them to return to play or work. Emotional exhaustion is consistently higher in all of the studies dealing with the athletic training student as well as the athletic training professional. The demands of patient care seem to add stress to athletic training students and professionals alike. Nurses, in particular, stated the reason is the vested time and energy with these patients who are sick.

In light of this information, steps should be taken to provide students with the tools necessary for stress reduction and education on coping skills to prevent burnout. These items may include; time management training, increased communication training, empathy training, and explanation of role delineation. This area needs additional research in the field of athletic training especially with the increase in program standards and the stringent pass rate requirement which places demands on both the students and the program.

The following information will focus on the methodology behind the study. An in-depth review of the implementation techniques and strategies that were utilized. The data will be displayed and disseminated. A final summary and conclusion will bring all of the information together. This research seeks to contribute to the existing literature by providing an in-depth review of the implementation strategies and tools used to reduce stress and prevent burnout. A discussion of the research results and conclusion will help to identify trends in stress reduction and the need for additional research.

CHAPTER THREE: METHODS

This dissertation in practice reports a pre-experimental applied research project designed to measure the effectiveness of two interventions. This first intervention provided information over the course of a spring semester to athletic training students about ways to reduce stress. The second intervention took place in the following fall semester and included having the athletic training students actually implement and report on stress-reduction strategies and techniques. The Athletic Training Student Burnout Inventory (ATSBI) and the Gallup student poll (GSP) were the two instruments used for data collection. Both instruments were administered as pre- and post-tests in two consecutive full semesters.

Research Questions

How are athletic training students at the University of Mary experiencing and addressing stress issues?

1. Does having an instructor present information over the course of a semester on stress and stress reduction techniques affect the students' level of burnout as measured by the ATSBI?

2. Does requiring students to practice and report stress reduction techniques affect the students' level of burnout as measured by the ATSBI?

3. What stress reduction techniques did the athletic training students report most useful?

4. How does measures of hope, engagement, and well-being for this group of athletic training students compare to national averages as reported on the Gallup student poll?

Participants

Undergraduate athletic training students in an undergraduate CAATE accredited athletic training program were asked to participate in this study. The students were accepted into the official professional undergraduate athletic training program at an NCAA Division II private university in the Midwest. The students' ages ranged from 18-23. The participants in the first phase of the research were sophomores, juniors, and seniors in the athletic training program. The students in the second phase of the study were juniors and seniors in the athletic training program. The students who were seniors during Phase 1 graduated after the first semester. The students who were a sophomore during Phase 1 had progressed to junior status by Phase 2. The students who were juniors during Phase 1 had progressed to senior status by Phase 2.

All participants were treated according to the ethical guidelines of two universities: North Dakota State University where the researcher was enrolled in the doctoral program (Appendix A), and the private university in the Midwest where the athletic training students were enrolled (Appendix B). According to the guidelines of these institutions, participants were asked to provide informed consent (Appendix C) they were assured that their data would be kept confidential and at any point, they could withdraw their permission for the use of their data.

Because the participants in this study were students in the classes of the doctoral researcher, care was taken to ensure that they did not feel coerced to participate in the study. Another CITI-certified faculty member at the private university attended the classes to do the recruitment and to collect informed consent. The signed informed consent documents were then mailed by this intermediary to the doctoral student's advisor at North Dakota State

University where they were kept in a locked filing cabinet. The same faculty member acted as the volunteer Proctor to facilitate pre- and post-test each semester.

After the end of the second intervention, data from students that did not complete the consent form were excluded, as well as the data of students that were not in the professional program or that withdrew from the athletic training program over the course of the study. A total of 26 students that completed the pre- and post-test during first intervention; 13 were sophomores and 13 were juniors. A total of 26 students completed the second phase and completed the pre- and post-tests; 13 were juniors and 13 were seniors. Out of the 26 participants, seven were male and 19 were female, which is a representation of the population of athletic training students at this university. At any given time the population of this universities athletic training program is approximately 60% female and 40% male. Each class varies in population but this number represents the total number of students in the program.

Intervention

Phase 1

The pretest was administered in December 2015 before the beginning of the spring semester. Over the course of the spring 2016 semester, the researcher and guest lecturers provided information to athletic training students about stress management to assist with stress reduction and burnout. This took place in a class associated with the athletic training students' clinical experience. The students were not asked to participate or practice the techniques outside of class time.

The goal was to educate the students during this time frame to help alleviate some of the stress student's deal with in college, specifically in the athletic training program. The hope was that this information will be transferred to their professional life which will help reduce

burnout in the athletic training profession. Over the course of the 15 weeks in the semester, different information surrounding techniques and tools for stress were provided on topics such as (1) time management skills including using a calendar, planner, and to-do lists; (2) incorporating exercise or meditation into their schedule, (3) counseling services available to students, and (4) Stress reducing information, including; stress reducing videos, stress-o-meter cards, chair stretching video, stress reducing sounds, and meditation video. These were provided by the researcher and guest lecturers, a nurse practitioner from the student health clinic and advisors from the student success center, according to their areas of expertise.

The guest lectures presented stress reducing information over the course of three class periods lasting 50 minutes in length. These took place in weeks four, six, and eight of the spring semester. The guest lecturers had the students practice relaxation techniques including the breathing technique, chair yoga, and meditation. These stress reducing strategies and techniques came in the form of videos that are accessible on the internet. There are many options for these stress reducing strategies and techniques online. All of the students in the class participated in these techniques during the class period but were not required to practice the techniques outside of class.

The researcher presented ideas four other times during the course of the semester lasting 10 minutes in length. These took place during weeks two, three, ten and twelve. These ideas consisted of using a calendar, planner, to-do lists, exercising, and meditation. All of these materials are accessible to the students in the bookstore on campus. There were no specifics on exercise or meditation presented only the reference to participating in these activities. The students did not practice any of these during class and were not required to practice them

outside of class. These were ideas presented by the researcher for the students to utilize in stressful situations and to maintain their stress levels.

The ATSBI was administered for a second time one week prior to finals week which is referenced as being a high-stress time for students. This concluded the first semester of implementation.

Phase 2

This phase occurred during the subsequent fall semester of 2016. Prior to the beginning of the semester, the researcher obtained IRB approval from both institutions to revise the original IRBs (Appendices A and B) in order to extend the study through another semester, allowing students to participate who had not previously participated, and to modify the intervention protocol to include application of stress reducing techniques. The athletic training students who were sophomores and juniors in the previous semester were now juniors and seniors respectively and were invited to participate in the second phase of this dissertation in practice. The consent and instrument delivery process were identical to the previous trial. In September 2016 the volunteer Proctor from the previous semester facilitated the recruitment of participants, collected signed informed consent forms, and then facilitated administration of the instruments electronically. This was believed to be a low-stress time for the students. The consent was completed again because of the change to the protocol approved by the IRB. The volunteer proctor mailed the signed consent forms to the researcher's advisor upon collection, as in the previous semester.

The second phase of the intervention started in September 2016. This was believed to be a low-stress time for the students. Over the course of the semester, the researcher introduced stress reducing strategies and techniques to assist with stress reduction, relaxation techniques,

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and burnout prevention. Students spent time participating in stress reducing strategies and techniques and were asked to practice outside of class time. The students were held accountable for reporting their stress levels, adherence to the stress reducing strategies and technique, and open ended questions on the utilization of the stress reducing technique every week or every other week. The detailed information regarding these tools and implementation will be discussed later in this chapter with attachments in the appendices.

The accountability was completed by juniors and seniors in the athletic training program. The students were to practice stress reducing strategies and techniques that were introduced the previous semester as well as gain new information and resources from the stress reducing techniques and tools provided over the course of the semester. The juniors met every Tuesday and the seniors meet every Thursday except when school was not in session. This round of stress application consisted of holding the students accountable for trying the stress reducing strategies and techniques. Implementation occurred weekly or every other week from two minutes up to 15 minutes per class session. At the beginning of each class, a formative assessment was completed by the athletic training students. The formative assessment took the form of a Minute Paper (see Appendix F). According to Angelo and Cross (1993), the Minute Paper is a form of classroom assessment which focuses on a deeper level of understanding rather than simple recall. It is named that because it is supposed to be a short response. The students were given a prompt, (Appendix F) and asked to briefly provide feedback. The intent of this particular assessment was to gain insight from the students in order to identify a technique or tool that assisted the athletic training students the most. Therefore, the athletic training students reflected on the stress reducing strategy and technique. Consequently, the information gained from the Minute Papers allows the researcher to analyze the usefulness of

each stress reducing strategy and technique. The information gathered was to assist the researcher in answering the third research questions: What stress reduction techniques did the athletic training students report most useful? The subsequent schedule was followed.

Week one

Week one was an introduction to the extension of the study started the previous semester, the administration of the informed consents was completed by the volunteer Proctor. The introduction included the following information: a time commitment of 2-15 minutes on a weekly basis to practice and learn techniques of reduce stress; accountability for exercises and techniques that were practiced during the week; Minute Papers that were completed at the beginning of each class explaining stress level and techniques utilized over the course of the week; and a review of expectations over the course of the semester.

Week two

Week two was a review of guest lectures from last semester regarding time management, relaxation techniques, stress reduction tools, and strengths review. The time usage chart, a tool that lays out every hour in the week that gives the students a picture of how they spend their time over a course of week, (168 hour) (Appendix G) and weekly schedule (Appendix H) were handed out and to be completed and returned the following week. Both of these were collected in week three.

Week three

Week three a Minute Paper was completed on Time usage chart and schedule. The time usage chart (Appendix G) and schedule (Appendix H) was collected week three. A short discussion on the stress diary was delivered. The stress diary (Appendix I) was collected in week four.

Week four

Week four a Minute Paper was completed on stress diary. The stress diary was collected. A short review of how to develop and write a SMART goal was delivered. A SMART goal (Appendix J) was developed for time management and stress reducing techniques/tools and was submitted in week five.

Week five

Week five a Minute Paper was completed on the SMART goal. The students' SMART goal (Appendix J) was collected. A discussion on how the students can use imagery to assist with their stress level was delivered. A SMART goal revolving around imagery was developed by the students (Appendix J).

Week six

Week six there was no intervention due do a school break.

Week seven

Week seven a Minute Paper was completed on the imagery SMART goal. Imagery SMART goal (Appendix J) was collected. A short discussion on coloring was delivered. The assignment of coloring five minutes prior to an exam or during stressful times throughout the week was given. Coloring sheets and crayons were provided for the students.

Week eight

Week eight a Minute Paper was completed on coloring. A discussion on listening to music to relieve stress and relax was delivered. A suggestion was given to try a variety of music and use during stressful times.

Week nine

Week nine a Minute Paper was completed on listening to music. A discussion on to do lists and turning negative thoughts into positive thoughts was delivered. Sheets on to do lists (Appendix K) and turning negative thoughts into positive thoughts (Appendix L) was handed out.

Week ten

Weeks ten and eleven were impacted by snow storms and school closings. Week ten a Minute Paper was completed on to do lists and positive thoughts. The do lists (Appendix K) and positive thoughts (Appendix L) were turned into the researcher. A discussion on SWOT analysis and SWOT sheet to complete (Appendix M) was delivered.

Week eleven

Week eleven a Minute Paper was completed on SWOT analysis. SWOT analysis (Appendix M) sheets were turned into the researcher. This week was impacted by a snow storm and school closing.

Week twelve

Week twelve an accumulation of the techniques and tools was completed (Appendix N).

Week thirteen

Week thirteen the volunteer Proctor administered the post-test. The volunteer proctor facilitated the post-test ATSBI electronically. Posttests were completed by December 2016. This is perceived to be a high-stress time for students with final exams pending. The Qualtrics file was exported to the researcher's computer after the posttest.

Reliability and validity

Mertens (2010) definition of reliability is stability over time. The Cronbach alpha scores above .70 are used to prove reliability. The surveys that were analyzed for this dissertation have reached that score for reliability. This reliability assists in the credibility of the research being completed. The ability to reproduce a study is relevant to the research regarding burnout. Mertens defines validity as the ability for a study to measure what it is supposed to measure. Validity is enhanced when behaviors that are trying to be changed have been a problem for an extended period of time (Mertens, 2010). The different types of validity that are mainly used in this dissertation include construct, content, criterion-related, and face validity. Internal validity answers the question, does the experimental treatment make a difference? External validity refers to the degree to which the results can be generalized to the wider population, cases, settings, times, or situations (p. 816). External validity asks the question, to what population or setting can the demonstrable effects be generalized? Face validity identifies if a test appears to test what it is supposed to test (Cohen, Manion, & Morrison, 2011).

Reliability is the ability to reproduce a study and find similar results. The Cronbach alpha is frequently used to measure reliability measuring its internal consistency. The Cronbach alpha provides a coefficient of the correlation for each of the items. The research in this chapter will provide the Cronbach alpha score for each instrument. This score is based on the test/re-test method which has the ability to calculate correlation coefficients to measure reliability. This demonstrates stability over time (Cohen, Manion, & Morrison, 2011).

Instrumentation

Two instruments were used to collect data as pre- and post-tests. These instruments were the Athletic Training Students Burnout Inventory (ATSBI) and the Gallup student poll (GSP). They were combined into one survey in Qualtrics and administered electronically

(Appendix D). The combined survey was administered a total of four times, and each time the

first question asked the participant to create a unique six-character self-identifying code that

would remain unchanged during the study. The following instructions and examples were

provided at the beginning of each administration.

Please create your own personal code using the information and examples below:

First letter of mother's first name? M-Mary M

Number of older brothers (living and deceased)? 01 –one 01

Number representing the month you were born? 05-May 05

First letter of middle name (If none, use X) A-Ann A

Subject-Generated Identification Code Example: M0105A

Athletic Training Students Burnout Inventory

The Athletic Training Burnout Inventory (ATBI) was modified from the Maslach

Burnout Inventory (MBI) as mentioned in Chapter Two. The stated intent of the authors of the

MBI is to have each profession create an edition of this instrument for each specific helping

profession that would coincide with the duties of that profession (Maslach & Jackson, 1981).

The athletic training profession previously did just that in the development of the ATBI

(Clapper & Harris, 2008). For this study, the Athletic Training Student Burnout Inventory

(ATSBI) (Appendix D) was adapted from the use of the ATBI with the permission from Dr.

Laura Harris, co-developer of the ATBI. The questions in the ATSBI were modified from the

ATBI to reflect the context experienced by athletic training student versus a certified athletic

training professional who is already working in the field. This resulted in a 35 item instrument

with a six point Likert scale, ranging from never true to always true. See Appendix E for the

comparison between the ATBI and the ATSBI. This information is explained in detail in this

chapter. The ATSBI was used in this particular dissertation in practice to gain insight regarding stress and burnout from athletic training students. The design of the instrument is similar to other instruments on burnout.

The original research from the ATBI was a descriptive study design. This dissertation in practice also is descriptive. In research that has been completed on burnout both qualitative and quantitative research designs have been utilized. The method depended on the goal of the research study. The goal of this dissertation in practice it is threefold: first to determine if there is a statistical significance in the pretest and the post test from the stress information and the stress application; second, to determine if there is a technique that assists the athletic training student to reduce stress the greatest; and third, to determine how the athletic training students compare to normative data for student well-being, hope, and engagement.

Gallup student poll

The second instrument was developed by the Gallup organization (Gallup, 2014). It has been administered annually across the United States since 2009 to measure the well-being, hope, and engagement of the students. There were 20 items in this instrument. The data collected from the Gallup student poll for the athletic students will be compared to the normative K-12 student population as measured by Gallup. This data will provide the professional athletic training program faculty with additional data points that may relate to athletic training students' potential burnout.

Validity and reliability were established and published in a technical report produced by Gallup (Lopez, Agrawal, & Calderon, 2010). The first poll in 2006 focused on engagement and contained 27 items. A predictive validity study was used and a Cronbach alpha of .84 was established for 11 items (Lopez, Agrawal, & Calderon, 2010). Then, in 2007 a 28 item poll was

administered in a cognitive lab study. The elementary students struggled with the wording of some of the questions during this trial. Further validation was established through psychometric studies. These were completed in 2008-2017. These psychometric studies established; content validity, reliability, factor structure, predictive validity, and concurrent validity. Therefore, the conclusion of each construct is as follows. The hope construct contained six items and an alpha above .70 (Gallup, 2010). The engagement construct contained five items and an alpha above .70 (Lopez, Agrawal, & Calderon, 2010). Finally, the well-being construct still needed a stability analysis completed at the time the report was published and had ongoing predictive validity analyses (Lopez, Agrawal, & Calderon, 2010).

For this delivery of the instrument for this dissertation in practice, well-being, hope, and engagement were part of the survey. There were 21 items in this instrument. The reason for the discrepancy in item numbers between the original Gallup student poll and the GSP that was delivered to the athletic training students is due to the fact that question one had two questions. Therefore, for the electronic delivery, this question needed to be broken into two questions. There was one question that was modified from the original GSP. This question on the original GSP stated "I know I will graduate from high school" was modified to "I know I will graduate from the athletic training program." The data collected from the Gallup student poll for the athletic students were compared to the normative K-12 student population as measured by Gallup. This data provides the professional athletic training program faculty with additional data points that may relate to athletic training students' potential burnout.

Data Analysis

Data preparation and cleaning

Each time the pre- and post-tests were administered, the data was downloaded to
Microsoft Excel on the researcher's computer, resulting in four separate files. These four sets of
data were then merged together by matching participants based on the self-identifying code that
participants created each time the tests were administered. Self-identifying codes that were not
identical were eliminated with the exception of one code. In this one case, the participant
appeared to enter a lower case "o" instead of a zero "0" as a self-identifying code. The research
team checked other demographic variables for this participant and they were identical across the
two semesters, so the researcher decided to retain this participant's data. There were other
instances where the participant had three surveys with identical codes and the fourth the code
seemed to contain a typographical error and did not match. In these instances, the researcher was
not sure this was the same person. There were a few cases in which the participant failed to
answer a specific item. In these cases, a score was not put in its place and the data was put in
SPSS the way the students responded.

Athletic training burnout inventory

Athletic training students answered the ATSBI using a six-point Likert scale. The six-
point Likert scale was intended to be as follows: 1-never true; 2-mostly not true; 3-sometimes
not true; 4-sometimes true; 5-mostly true; 6-always true. However, when the Likert scale was
entered into Qualtrics the second and third measures were transposed causing them to be labeled
incorrectly: 1-never true; **2-sometimes not true; 3-mostly not true**; 4-sometimes true; 5-mostly
true; 6-always true. This error was not caught until after the data was collected. The researcher
considered multiple ways to compensate for this entry error. There is a chance that the
participants did not read the Likert scale correctly and answered as though the points were in a

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logical order. This may be the case because none of the participants brought the error to the

attention of either the researcher or the proctor administering the survey any of the four times

they were presented with it. However, it would not be appropriate to assume that the participants

read the anchor points as though they were correct. The researcher considered combining 2 and 3

and 4 and 5 into joint categories. This would have resulted in a four-point Likert scale ranging

from Never True – Sometimes Not True – Sometimes True – Always True. A committee

member pointed out that *Sometimes True* and *Sometimes Not Tru*e are basically equivalent. This

would effectively create three answers *Never – Sometimes – Always* and this would not allow

sensitive analysis of the participants' responses. The researcher made the decision to combine

points 2 and 3

This six-point Likert scale was then condensed to a five-point Likert scale for data

analysis due to the error. This five-point Likert scale was as follows: 1-never true; 2-sometimes

not true; 3-sometimes true; 4-mostly true; 5-always true. From the ATSBI, ten questions were

reverse coded for analysis due to the positive format of the questions. The five point Likert scale

for questions 10, 12, 15, 19, 21, 22, 24, 25, 34, and 36 were as follows: 1-always true; 2-mostly

true; 3-sometimes true; 4-sometimes not true; 5-always not true. These ten questions were

modified and created new from the ATBI. The questions 10, 12, and 21 were created new for

the ATSBI using wording from Organizational Support construct from the ATBI. For the ATSBI

Q12 clustered into the SE construct and Q10 and 21 did not cluster into a construct. The question

19 was created new from the Self-Efficacy construct. This questions did not cluster into any

construct for the ATBI. The questions 22, 24, and 25 were created new from the ATBI using

wording from the Time Commitment construct. For the ATSBI none of these questions clustered

into a construct. The constructs for Q34 and Q36 were modified from the ATBI. The ATBI had

these two questions under the construct Emotional Exhaustion and Depersonalization. For the

ATSBI Q34 clustered into the SE construct and Q36 did not cluster in any construct. These

questions were reverse coded due to the fact that all ten statements were phrased positively. Only

two of these statements clustered into SE constructs. These two statements were: "I feel

exhilarated when I accomplish something at school" and "I feel I have a positive influence on

others." The other eight items (Q10, Q12, Q19, Q21, Q22, Q24, Q25, and Q36) loaded at below

the required .50 standard or when completing the Cronbach alpha were eliminated due to

producing a less than desirable reliability score.

The following Table 1 depicts the question number and question that was reverse coded

along with the associated construct. The questions that have a hyphen did not load with one of

the constructs used for the ATSBI.

Table 1

*ATSBI reverse coded questions and ATBI construct where the ATSBI question originated: The
questions with a --- did not load an ATSBI construct*

Question	ATBI Construct	ATSBI Construct	ATSBI question
Q10	OS	---	I can effectively solve problems that arise at school
Q12	OS	SE	I feel I am making an effective contribution to the athletic training program
Q15	OS	SE	I feel exhilarated when I accomplish something at school
Q19	AR	---	I feel confident that I am effective at getting things done
Q21	OS	---	I feel I have a support system at school and home
Q22	TC	---	I feel there is enough time in the day to accomplish everything for school
Q24	TC	---	I feel I have good time management skills
Q25	TC	---	I enjoy working with others
Q34	EE&D	SE	I feel I have a positive influence on others
Q36	EE&D	---	I feel very energetic while working with others

Athletic Training Burnout Inventory Validation

The ATSBI consisted 35 questions, which were amended questions from the ATBI

instrument (with the verbal permission of Dr. Laura Harris, fall 2015) and the creation of new

questions. The questions were amended, dropped, or created for the ATSBI due to the fact the ATBI was intended for athletic training professionals and the ATSBI was intended for athletic training students. See Chapter Three for more information on instrument development.

In order for a factor analysis to be relevant, over 50 cases were needed (Cronk, 2012). In order for constructs to be designed for the ATSBI, a factorial analysis was completed to establish questions that clustered together to make a construct. This was to ensure that the questions were placed in a construct according to data analysis and not subjectively by researcher thoughts on where the questions should be placed. The ATSBI was administered over a period of four times. A total of 26 participants completed all four surveys. Therefore, all four administrations of the ATSBI (December 2015, April 2016, September 2016, and December 2016) were used to establish more than 50 cases. Thus, in order for the factor analysis to be quantifiable all four sets of the cases needed to be combined for a factor analysis. The 104 cases consisted of all of the students who completed the instrument over the course of the four administration periods.

A factor analysis was completed using the five-point Likert scale. Upon completion of the factor analysis, 35 factors emerged with ten having eigenvalues greater than one. See Table 2 below for the Eigenvalues.

Table 2

Eigenvalues and Percentage of Variance for Items in each of the Factors that Loaded in a Construct for the ATSBI

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.97	31.34	31.34	10.97	31.34	31.34
2	3.05	8.70	40.05	3.05	8.70	40.05
3	2.04	5.83	45.88	2.04	5.83	45.88
4	1.86	5.33	51.20	1.86	5.33	51.20
5	1.46	4.17	55.38	1.46	4.17	55.38
6	1.33	3.80	59.17	1.33	3.80	59.17
7	1.21	3.46	62.63	1.21	3.46	62.63
8	1.19	3.40	66.03	1.19	3.40	66.03
9	1.10	3.16	69.19	1.10	3.16	69.19
10	1.01	2.90	72.09	1.01	2.90	72.09
11	0.88	2.50	74.59			
12	0.82	2.33	76.92			
13	0.74	2.11	79.03			
14	0.66	1.90	80.93			
15	0.65	1.87	82.80			
16	0.58	1.67	84.47			
17	0.56	1.59	86.06			
18	0.51	1.45	87.51			
19	0.50	1.42	88.93			
20	0.44	1.25	90.18			
21	0.40	1.13	91.31			
22	0.37	1.05	92.37			
23	0.32	0.93	93.29			
24	0.30	0.87	94.16			
25	0.29	0.83	94.99			
26	0.27	0.76	95.75			
27	0.23	0.65	96.40			
28	0.22	0.63	97.03			
29	0.18	0.52	97.55			
30	0.17	0.49	98.05			
31	0.17	0.48	98.53			
32	0.16	0.44	98.97			
33	0.14	0.39	99.37			
34	0.12	0.36	99.72			
35	0.10	0.28	100.00			

Factor eight, nine, and ten were eliminated because they only contained one item. Factor loading was utilized to establish factors. A value of .50 was deemed necessary to meet the standards of a quality construct question. Questions that scored below the .50 threshold were deemed invalid. Questions above the .50 threshold were used to form the new constructs. Two constructs emerged and were provided names that are consistent with previous research. The first construct emerged with 13 items and became known as Emotional Exhaustion (EE). The EE pertains to the athletic training students feeling emotionally overextended. In the ATBI the EE construct was lumped together with Depersonalization as one construct. The Maslach Burnout Inventory (MBI), like the ATSBI, had separate constructs for EE. The MBI also had a separate construct for Depersonalization. The factor analysis revealed the constructs as separate from this research and the Depersonalization construct did not produce a high enough Cronbach alpha score to establish itself as a construct. Therefore, the EE construct was the only one used for this dissertation in practice. The information regarding the EE and Depersonalization constructs from the ATBI and the MBI are discussed in Chapter Two (Maslach & Goldberg, 1993). Factor two loaded with three items SE was also added to the ATSBI because the two questions that clustered together pertained to how the athletic training students felt about themselves. The SE construct had three questions that loaded above the .50 threshold. When a Cronbach alpha was completed the alpha was a .62. Therefore, question 36 was eliminated due to the fact the Cronbach alpha score then reached the necessary .70 threshold (.72). For factors three through seven, which all also contained two items they too needed a Cronbach alpha score to deem if they reached the .70 threshold. Upon completion of the Cronbach alpha, none of the factors reached the necessary .70 threshold. In previous research, the SE construct was not used; however, there were questions

pertaining to how the participant felt. This was referred to as the personal accomplishment construct in the ATBI. The researcher felt self-efficacy was a better way to explain this construct for this dissertation in practice.

The following Table 3 provides the factor analysis information.

Table 3

Factor Loadings From Principal Component Factor Analysis and the ATSBI Question

	1	2	3	4	5	6	7	8	9	10
Q9	**0.74**	0.12	0.18	0.26	-0.02	0.08	0.04	-0.06	-0.16	0.01
Q31	**0.74**	0.01	0.16	0.01	0.19	0.11	0.04	0.17	0.21	0.06
Q37	**0.73**	0.05	0.04	0.10	0.06	0.14	0.16	0.20	0.29	0.14
Q26	**0.71**	0.12	-0.02	0.08	0.12	-0.15	-0.02	-0.07	0.09	-0.10
Q11	**0.68**	0.01	0.22	0.29	-0.03	0.11	0.18	0.09	-0.04	0.16
Q14	**0.65**	0.15	0.06	0.32	0.20	-0.26	0.23	0.24	0.05	-0.10
Q6	**0.61**	0.06	0.17	-0.02	0.01	0.29	0.24	0.39	-0.05	0.15
Q13	**0.59**	0.19	0.07	0.33	0.19	-0.10	0.17	0.11	0.13	-0.33
Q32	**0.59**	0.17	0.05	0.01	0.35	0.20	0.03	-0.20	0.10	0.31
Q7	**0.58**	0.01	0.07	0.09	0.03	0.39	0.07	0.39	-0.12	-0.01
Q23	**0.57**	0.01	0.22	-0.09	0.38	0.20	0.27	0.21	0.05	0.14
Q28	**0.55**	0.24	0.34	-0.04	-0.25	-0.12	0.02	0.18	0.24	0.18
Q38	**0.54**	0.27	0.26	-0.09	0.13	-0.14	0.01	0.50	-0.06	0.11
Q39	0.49	0.11	0.38	-0.06	0.18	0.03	-0.04	0.41	-0.12	0.11
Q15	0.18	**0.82**	-0.01	0.00	0.08	0.08	0.18	0.01	-0.07	0.06
Q34	0.14	**0.67**	0.08	0.22	0.20	0.19	-0.01	0.11	-0.17	-0.17
Q36	0.12	**0.53**	0.25	0.48	-0.15	0.01	0.09	0.03	0.20	-0.06
Q25	0.10	0.42	0.14	0.16	0.20	0.29	-0.13	-0.36	0.37	-0.27
Q19	0.12	0.40	0.02	0.29	0.10	0.36	0.18	0.22	0.27	-0.12
Q30	0.12	0.01	**0.82**	0.09	0.01	0.01	0.06	0.13	-0.03	0.05
Q29	0.25	0.06	**0.80**	0.10	0.02	-0.01	-0.04	0.07	0.13	0.04
Q33	0.25	0.11	0.18	**0.77**	0.08	-0.03	-0.01	-0.11	-0.06	-0.10
Q10	0.07	0.27	0.01	**0.65**	0.25	0.14	0.20	0.20	0.17	0.26
Q18	0.28	0.20	0.17	0.09	**0.63**	0.02	0.09	0.13	0.34	-0.09
Q12	0.11	0.44	-0.21	0.13	**0.61**	0.09	0.02	0.21	-0.01	0.09
Q17	0.18	0.03	0.46	0.14	**0.55**	0.05	0.38	-0.09	0.01	-0.17
Q40	0.18	-0.25	0.01	0.37	0.46	0.22	0.08	0.15	0.43	0.06
Q24	-0.02	0.31	-0.08	0.02	0.07	**0.77**	0.21	0.06	0.10	-0.08
Q8	0.59	0.03	0.07	-0.03	0.13	**0.60**	-0.06	0.01	-0.05	0.05
Q21	0.10	0.15	-0.01	-0.03	0.05	0.09	**0.73**	-0.03	0.20	-0.16
Q20	0.44	0.07	0.05	0.27	0.09	0.15	**0.64**	0.04	0.11	0.21
Q35	0.11	0.03	0.46	0.33	0.26	-0.01	0.47	0.02	-0.19	0.02
Q22	0.28	0.08	0.20	0.10	0.16	0.17	-0.08	**0.64**	0.23	-0.05
Q16	0.06	-0.07	0.01	0.01	0.10	0.01	0.16	0.02	**0.80**	0.03
Q27	0.20	-0.08	0.10	0.01	-0.01	-0.07	-0.07	0.03	0.02	**0.87**

Reliability

The ATSBI, which was modified from the ATBI, was to accommodate the athletic training student. The ATBI established reliability as shown in Chapter Two. The ATSBI needed to establish reliability. One way to establish a form of reliability is to perform a Cronbach alpha. A Cronbach alpha was completed for each of the seven constructs and included 104 items with an item total analysis. The 104 items came from the 26 participants who completed the four instruments. The results of the Cronbach alpha were well above the commonly accepted reliability scores (.70) and in alignment with previous ATBI research (see Table 4). Therefore, the ATSBI satisfied one form of reliability with two constructs. The overall α had a score of .75, the EE construct had an α score of .92, and the SE construct had an α score of .72. As explained earlier the original SE construct had three questions but upon completion of the Cronbach alpha score, one item was removed to raise the alpha of the SE construct from .62 to .72. Therefore this question was eliminated and thus establishing the necessary Cronbach alpha score. These scores reflect the α from the previous research of the ATBI and the MBI as explained in Chapter Two. The other eight factors contained three or fewer questions and, after the Cronbach alpha was completed, these factors did not meet the minimum alpha score of .70. Therefore, the factors were not created into constructs for this research.

The aforementioned Cronbach alpha scores are in the following Table 4.

Table 4

Cronbach Alpha for Each Construct that Emerged From the Factor Analysis and the Overall Cronbach Alpha

Construct	Question		α
Emotional Exhaustion (EE)			0.92
	Q9	School and clinical responsibilities all day are a strain for me	
	Q31	I feel overwhelmed by duties I am expected to perform as an ATS	
	Q37	I feel overwhelmed by duties	
	Q26	I feel emotionally exhausted after my clinical observations/rotations	
	Q11	I feel burnout from school	
	Q14	I have become less enthusiastic about school	
	Q6	I feel emotionally drained from my schoolwork	
	Q13	I have become less interested in school	
	Q7	I feel used up at the end of the school day	
	Q32	I feel fatigued when I think about facing another day	
	Q23	I feel overwhelmed on a daily basis	
	Q28	I feel as though I have too many responsibilities as an ATS	
	Q38	I have too much homework	
Self-Efficacy (SE)			0.72
	Q15	I feel exhilarated when I accomplish something at school	
	Q34	I feel I have a positive influence on others	
Overall			0.75

Descriptive statistics is a procedure for summarizing a group of scores in order to make the results comprehensible (Aron, Coups, & Aron, 2011). Descriptive statistics are used to analyze the data that has been collected in the implementation process; this includes the mean, median, mode, frequency, and percentages. For example, the specific values that describe the characteristics of the athletic training students were organized to describe the sample population of the athletic training student. Inferential statistics is the next step for summarizing the data and is a procedure for drawing conclusions based on the scores that are collected (Aron, Coups, & Aron, 2011). The step is used to make inferences about the larger population based on the results of the sample population. For example, inferential statistics are used to

draw a conclusion regarding which intervention is best suited for athletic training students in reducing stress levels. Descriptive statistics were used in analyzing the ATSBI.

A repeated measures ANOVA was used for statistical analysis. This measurement allows the questions to be answered whether or not the results are statistically significant. For example, the responses on the ATSBI are in categories resembling a Likert scale, the score represents the level of burnout/stress the student feels at the time of completing the survey; the expected outcome would be that during higher stress times for the students the scores would reflect higher stress. The null hypothesis would be rejected by determining the degrees of freedom and the significance level of the particular study. Statistical significance will be set at $p \leq .05$ to prove statistical significance. The first two research questions would be answered by this analysis.

Qualitative data is used to describe the data. This type of analysis allows the researcher to analyze data that is unable to be measured statistically. The qualitative analysis will be used to identify an understanding of what technique may be most beneficial for the athletic training students. This analysis consists of reviewing the themes that arise from the Minute Papers. The specific themes stem from the questions: "what was most useful on the technique that was utilized"; and "how could you incorporate this technique into your daily life." The themes will be coded. According to Saldaña (2016) "coding is heuristic-an exploratory problem-solving technique without specific formulas or algorithms to follow" (p. 9). Coding is used to link ideas together. For example, the comments that are positive will be coded in a general category and then broken down into specific comments. This will continue with the negative comments as well. The end result will be a compilation of words that will assist the researcher in understanding which intervention was most beneficial for the athletic training students.

Gallup student poll

The cleaning process for the GSP consisted of two phases. The first consisted of cleaning the first two open ended questions which were an eleven point scale which were short answer. These questions involved the image ladder. These questions are: "Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time? On which step do you think you will stand about five years from now?" (Gallup, 2014). These questions consisted of a zero to ten scales instead of the 5-point Likert scale as the rest of the questions in the GSP. Some of the athletic training students felt two numbers were a better way to answer the questions instead of one number. Some of the students typed in a range of two numbers. When this happened, an average score from the two numbers the students answered was the number that was recorded and displayed in the data. This occurred only two times.

The second cleaning process came from Questions 3-20 used a 5-point Likert scale from 1-strongly disagree 2-disagree 3-neither disagree nor agree 4-agree 5-strongly agree. This was an existing instrument used by Gallup (Gallup, 2014). If the students did not answer a question, the researcher let Statistical Packages for Social Sciences (SPSS) calculate the data without a number for that particular question.

Descriptive statistics were used to report the data from this group of athletic training students. The information that was reported included a comparison of the normative data compared to the data from the participants.

The next chapter will provide the results of the data analysis.

CHAPTER FOUR: RESULTS

The purpose of this dissertation in practice was to examine stress and burnout in athletic training students. The data gathered assisted the researcher in determining if there is a stress reducing strategy or technique that assists the athletic training students in dealing with stress and burnout. Thus, the subsequent data analysis reveals stress reducing strategies or techniques that were beneficial for athletic training students. Moreover, the data reveal statistical differences over time as measured by the Gallup student poll (GSP) that was administered to the athletic training students. Therefore, the statistical analysis and descriptive analysis determined whether there is significance.

Chapter Three contained specific information on the participants, the interventions broken down into phase one and phase two, the instruments including reliability and validity information, the preparation and cleaning of the data for each instrument, and finally, the data analyses used for this dissertation in practice. Chapter Four provides a review of the research questions and a discussion of the data analysis compilation about the participants involved in the study, the descriptive statistics from all portions of the study, the statistical analysis of the Repeated-Measure Analysis of Variance (ANOVA) to answer the first two research questions, the qualitative analysis to answer question three, and the utilization of the normative values from the GSP to answer the fourth research question.

Research Questions

1. Does having an instructor present information on stress and stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?

2. Does requiring students to practice and report stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?

3. What stress reduction techniques do athletic training students report as most useful? These research questions are individually answered in this chapter and then an overall summary is provided in the subsequent chapter.

4. How do measures of hope, engagement, and well-being for this group of athletic training students compare to national averages as reported on the Gallup student poll?

Data Analysis

ATSBI descriptive statistics

Descriptive statistics were analyzed for the ATSBI. This analysis was used for all four administrations of the ATSBI. The first two administrations (December 2015 and April 2016) and the last two administrations (September 2016 and December 2016) were compared for evaluation of the means. During the course of the semester between the first two administrations (December 2015 and April 2016), the 26 athletic training students were sophomores and juniors. Over the course of the semester, the athletic training students had the choice whether or not to use the information presented to them (as described in Chapter Three). The ATSBI was distributed pre-information delivery (December 2015) and post-information delivery (April 2016). This administration was one week prior to finals for both administrations of the ATSBI. This time period for administration was used because it is normally a high-stress time for all students. By using a time of high-stress time for the athletic training students, the ATSBI results reveal whether or not the stress reducing information was helpful over the course of that semester.

The subsequent semester the athletic training students were asked to practice and implement the stress reducing strategies and techniques that were presented to them. During this semester the group of 26 students were a year closer to graduation. Instead of juniors and sophomores during this implementation period, the students were seniors and juniors. Stress reducing strategies and techniques were completed during the course of the semester (see Chapter Three and displays in the appendices). The ATSBI was administered pre-implementation of the stress reducing strategies and techniques (September 2016) and post-implementation of the stress reducing strategies and techniques (December 2016). Each week the athletic training students were provided a stress reducing strategy or technique to practice over the course of the week (see Chapter Three and the appendices).

Data Analysis

A paired sample *t* test was used to compare the means of two scores. The means from each of the constructs and the overall mean score were analyzed to determine a level of significance. The mean scores from the Emotional Exhaustion (EE) and Self-Efficacy (SE) constructs were compared as well as the overall mean scores. The scores from each of the four administrations of the ATSBI (December 2015, April 2016, September 2016, and December 2016) were compared. The mean scores from the EE construct were compared against each other to determine if there was a significant difference for this construct during any of the four administrations of the ATSBI. The mean scores from the SE construct were compared against each other to determine if there was a significant difference for this construct during any of the four administrations of the ATSBI. The overall mean scores were compared against each other to determine if there was a significant difference during any of the four administrations of the ATSBI.

The pre1 is the December 2015 administration, the post1 is the April 2016 administration, the pre2 is the September 2016 administration, and the post2 is the December 2016 administration. There are four time periods that reveal statistical significance using a level set at $p \leq .05$. The significant results are as follows.

A paired sample t test was calculated to compare the SE mean score of December 2015 to the SE mean score of December 2016. The SE mean score for December was 4.31 ($sd = 1.59$) and the SE mean score for December 2016 was 4.96 ($sd = 1.48$). This shows a significant increase from the SE December 2015 to December 2016 was found ($t(26) = -.65$, $p \leq .05$). A paired sample t test was calculated to compare the SE mean score of April 2016 to the SE mean score of September 2016. The SE mean score for April was 4.08 ($sd = 1.23$) and the SE mean score for September 2016 was 4.62 ($sd = 1.24$). This shows a significant increase from the SE April 2016 to SE September 2016 was found ($t(26) = -.54$, $p<.05$). A paired sample t test was calculated to compare the SE mean score of April 2016 to the SE mean score of December 2016. The SE mean score for April was 4.08 ($sd = 1.23$) and the SE mean score for December 2016 was 4.96 ($sd = 1.48$). This shows a significant increase from the SE April 2016 to the SE September 2016 was found ($t(26) = -.88$, $p<.05$). The SE construct for April 2016 as compared to December 2016 reveals a statistical significance (p=.01).

A paired sample t test was calculated to compare the overall mean score of September 2016 to the overall mean score of December 2016. The overall mean score for September 2016 was 43.20 ($sd = 7.51$) and the overall mean score for December 2016 was 46.04 ($sd = 11.10$). This shows a significant increase from the overall September 2016 to the overall December 2016 was found ($t(26) = -7.42$, $p<.05$).

Research question 1 and 2

By these results, the null hypothesis for the following research questions is retained: "Does having an instructor present information on stress and stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?"; "Does requiring students to practice and report stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?" Therefore, showing the presented information or the practicing of stress reducing strategies was effective for self-efficacy for this group of athletic training students and overall effectiveness for the second research question with this statistical analysis.

The following Table 5 shows all of these results.

Table 5

Paired-Samples T-Test for Each Construct When Analyzed Against a Different Administration Time Period of the ATSBI

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	*p*
					Lower	Upper			
Pair 1	EEpre1 - EEpost1	-1.80	7.82	1.56	-5.03	1.43	-1.15	24.00	0.26
Pair 2	EEpre2 - EEpost2	-2.54	7.51	1.47	-5.57	0.50	-1.72	25.00	0.10
Pair 3	EEpre1 - EEpost2	-3.65	13.78	2.70	-9.22	1.91	-1.35	25.00	0.19
Pair 4	EEpre1 - EEpre2	-1.12	8.62	1.69	-4.60	2.37	-0.66	25.00	0.52
Pair 5	EEpost1 - EEpre2	0.76	5.82	1.16	-1.64	3.16	0.65	24.00	0.52
Pair 6	EEpost1 - EEpost2	-1.80	10.01	2.00	-5.93	2.33	-0.90	24.00	0.38
Pair 7	SEpre1 - SEpost1	0.23	1.77	0.35	-0.49	0.95	0.66	25.00	0.51
Pair 8	SEpre1 - SEpre2	-0.31	1.23	0.24	-0.80	0.19	-1.28	25.00	0.21
Pair 9	SEpre1 - SEpost2	-0.65	1.87	0.37	-1.41	0.10	-1.78	25.00	0.09
Pair 10	SEpost1 - SEpre2	-0.54	1.24	0.24	-1.04	-0.04	-2.21	25.00	0.04
Pair 11	SEpost1 - SEpost2	-0.88	1.58	0.31	-1.52	-0.25	-2.85	25.00	0.01
Pair 12	SEpre2 - SEpost2	-0.35	1.50	0.29	-0.95	0.26	-1.18	25.00	0.25
Pair 13	Overallpre1 - Overallpost1	-1.08	15.47	3.16	-7.61	5.45	-0.34	23.00	0.74
Pair 14	Overallpre1 - Overallpre2	-3.30	15.24	3.18	-9.90	3.29	-1.04	22.00	0.31
Pair 15	Overallpre1 - Overallpost2	-7.64	27.52	5.50	-19.00	3.72	-1.39	24.00	0.18
Pair 16	Overallpost1 - Overallpre2	-0.91	10.19	2.13	-5.32	3.49	-0.43	22.00	0.67
Pair 17	Overallpost1 - Overallpost2	-6.20	18.22	3.64	-13.72	1.32	-1.70	24.00	0.10
Pair 18	Overallpre2 - Overallpost2	-7.42	16.04	3.27	-14.19	-0.65	-2.27	23.00	0.03

p≤.05

Note. EEpre1=emotional exhaustion construct December 2015, EEpost1=emotional exhaustion construct April 2016, EEpre2=emotional exhaustion construct September 2016, EEpost2=emotional exhaustion December 2016, SEpreEpost1=self-efficacy April 2016, SEpre1=self-efficacy construct September 2016, SEpost2=self-efficacy construct December 2016, Overallpre1=overall construct December 2015, Overallpost1=overall construct April 2016, Overallpre2=overall construct September 2016, and Overallpost2=overall construct December 2016

A repeated-measure ANOVA determined if the null hypotheses questions is rejected or retained. If the null hypothesis is rejected the research results are significant. If the null hypothesis is retained the research results are not significant. The first question of this research

study was whether or not having an instructor present stress reducing strategies and techniques over the course of a semester affects student burnout level as measured by the ATSBI. The second research question of this research study was whether or not having an instructor have the athletic training students apply the stress reducing strategies and techniques over the course of a semester affects student burnout level as measured by the ATSBI. To answer these questions, the repeated-measures ANOVA was used. In order for this statistical analysis to be valid, the research question must first be reworded into a null hypothesis (Cronk, 2012). The null hypothesis was stated as: there is no significant level of stress reduction over the course of the semester between students before and after instructor presentations on stress and stress reduction information and there is no significant level of stress reduction when requiring students to practice and report stress reduction techniques over the course of a semester as measured by the ATSBI. Results of the repeated-measures ANOVA specifies that the data vary from expected values. A test that is not significant indicates the data is consistent with expected values.

A one-way repeated-measures ANOVA was calculated comparing the scores of participants at four different administration times: December 2015, April 2016, September 2016, and December 2016. The results from overall burnout when completing the Mauchly's Test of Sphericity reveal that it is significant at a .00 level. The results were then reviewed using the multivariate correction because Sphericity cannot be assumed. This analysis consists of analyzing the Greenhouse-Geisser statistics. The Tests of Within-Subjects Effects of the Greenhouse-Geisser are not significant effect was found F(1.56, 37.48)=1.51, *p* =.23). No significant different exists among overallpre1 (December 2015) (*m*=41.84, *sd* 10.51) to overallpost1 (April 2016) (*m*=43.40, *sd* 8.35); overallpre2 (April 2016) (*m*=43.40, *sd* 8.35) to September 2016 (*m*=43.20, *sd* 7.51); and September 2016 (*m*=43.20, *sd* 7.51) to December 2016

(*m*=46.04, *sd* 11.10). The effect size that is of .06 or lower is classified as having a low effect

(Cronk, 2012). The effect size for this instruments is .06 which is well below a small effect size.

The overall mean scores show an increase in the April 2016 ATSBI. This may indicate the

information presented to the students assisted with stress over the course of the semester, but the

students did not use the information to assist them in completing the ATSBI at the end of the

semester.

The following Table 6, Table 7, and Table 8 show the results of the above-mentioned

information.

Table 6

Descriptive Statistics for Overall Construct Including Mean, Standard Deviation, and Number

Test	*M*	*sd*	N
Overallpre1	41.84	10.51	26
Overallpost1	43.4	8.35	26
Overallpre2	43.20	7.51	26
Overallpost2	46.04	11.10	26

Note. Overallpre1=overall construct for December 2015, Overallpost1=overall construct for
April 2016, Overallpre2=overall construct for September 2016, and Overallpost2=overall
construct for December 2016

Table 7

*Mauchly's Test for Sphericity for the Overall Construct Including Significance and Degrees of
Freedom*

Measure: MEASURE_1						Epsilonb	
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	*df*	*p*	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
overall	0.23	33.4	5.00	0.00	0.52	0.55	0.33

p≤05

Table 8

Tests of Within-Subjects Effects for Overall Construct Including Significance and Degrees of Freedom

Source		Type III Sum of Squares	df	M²	F	p	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Overall	Greenhouse-Geisser	231.24	1.56	148.09	1.51	0.23	0.06	2.37	0.27
	Greenhouse-Geisser	3664.76	37.48	97.79					

p≤.05

Research question 1

The question "Does having an instructor present information on stress and stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?" was answered by analyzing the overall results from the December 2015 ATSBI and comparing those results to the April 2016 ATSBI. This analysis reveals that the stress-reducing strategies and techniques presented to this group of athletic training students did not assist them as they dealt with their stress levels when completing the ATSBI in April 2016. Consequently, the information presented to this group of athletic training students did not impact them. Therefore, the null hypothesis for the first research question is retained.

Research question 2

For the second research question: "Does requiring students to practice and report stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?", the data was analyzed from the overall results of the ATSBI in September 2016 as compared to December 2016.

A one-way repeated-measures ANOVA was calculated comparing the scores of participants at four different times: December 2015, April 2016, September 2016, and December

2016 for the EE construct. The results from the EE construct when completing the Mauchly's

Test of Sphericity reveal that it is significant at a.00 level. The results are then reviewed using

the multivariate correction because Sphericity cannot be assumed. This analysis consists of

analyzing the Greenhouse-Geisser statistics. The Tests of Within-Subjects Effects of the

Greenhouse-Geisser are not significant effect was not found F(1.67, 38.56 =1.87), p =.28). No

significant different exists among December 2015 (m=37.56, sd 9.88) to April 2016 (m=39.36,

7.81); April 2016 (m=39.36, sd 7.81) to September 2016 (m=38.6, sd 7.16); and September 2016

(m=38.6, sd 7.16) to December 2016 (m=41.16, sd 10.24). The effect size that is of .2 or lower is

classified as having a low effect (Cronk, 2012). The effect size for the instruments is .05 which is

insignificant which is expected.

The following Table 9, Table 10, and Table 11 show the results of the above-mentioned

information.

Table 9

Descriptive Statistics for Emotional Exhaustion Construct Including Mean, Standard Deviation, and Number

Test	*M*	*sd*	N
EEpre1	37.56	9.88	26
EEpost1	39.36	7.81	26
EEpre2	38.6	7.16	26
EEpost2	41.16	10.24	26

Note. EEpre1=emotional exhaustion construct for December 2015, EEpost1=emotional exhaustion construct for April 2016, EEpre2=emotional exhaustion construct for September 2016, and EEpost2=emotional exhaustion construct for December 2016

Table 10

Mauchly's Test for Sphericity for Emotional Exhaustion Construct Including the Significance and Degrees of Freedom

| Measure: MEASURE_1 | | | | | Epsilonb | | |
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	*df*	*p*	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
EE	0.26	30.51	5	0.00	0.54	0.57	0.33

p≤.05

Table 11

Tests of Within-Subjects Effects for Emotional Exhaustion Construct Including Significance and Degrees of Freedom

Source		Type III Sum of Squares	*df*	*M²*	*F*	*p*	Partial Eta Squared	Noncent. Parameter	Observed Powera
EE	Greenhouse-Geisser	172.83	1.62	106.88	1.31	0.28	0.05	2.11	0.24
	Greenhouse-Geisser	3173.92	38.81	81.79					

p≤.05

Research question 1

The question "Does having an instructor present information on stress and stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?" a repeated-measures ANOVA was completed to determine statistical significance. The results from the EE construct reveal the Mauchly's test for sphericity was significant but sphericity could not be assumed. Therefore, the Greenhouse-Geisser test was used for statistical significance. The Greenhouse-Geisser test revealed no statistical significance (p=.28). Because the Greenhouse-Geisser was not statistically significant, a post hoc test did not need to be completed. This analysis reveals that the stress-reducing strategies and techniques presented to this group of athletic training students did not assist them as they dealt with their emotional

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exhaustion when completing the ATSBI in April 2016. Consequently, the information presented to this group of athletic training students did not impact their emotional exhaustion. Therefore, the null hypothesis for the first research question is retained.

Research question 2

For the second research question: "Does requiring students to practice and report stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?", a repeated-measures ANOVA was completed to determine statistical significance. The results from the EE construct reveal the Mauchly's test for sphericity was significant but sphericity could not be assumed. Therefore, the Greenhouse-Geisser test was used for statistical significance. The Greenhouse-Geisser test revealed no statistical significance (p=.27). Because the Greenhouse-Geisser was not statistically significant, a post hoc test did not need to be completed. This analysis reveals that the stress-reducing strategies and techniques used by this group of athletic training students did not assist them as they dealt with their emotional exhaustion when completing the ATSBI in April 2016. Consequently, the stress reducing strategies and techniques used by this group of athletic training students did not impact their emotional exhaustion. Therefore, the null hypothesis for the second research question is retained.

A one-way repeated-measures ANOVA was calculated comparing the scores of participants at four different times: December 2015, April 2016, September 2016, and December 2016 for SE. The results from self-efficacy when completing the Mauchly's Test of Sphericity reveal that it is significant at a.01 level. The results are then reviewed using the multivariate correction because Sphericity cannot be assumed. This analysis consists of analyzing the Greenhouse-Geisser statistics. The Tests of Within-Subjects Effects of the Greenhouse-Geisser are significance. A significant effect was found $F(2.45, 61.25) = 3.18$, $p = .04$). No significant

difference exists among December 2015 (*m*=4.31, *sd* 1.59) to April 2016 (*m*=4.08, *sd* 1.23); and

April 2016 (*m*=4.08, *sd* 1.23) to September 2016 (*m*=4.62, *sd* 1.24). However, there is a

significant difference among September 2016 (*m*=4.62, *sd* 1.24) to December 2016 (*m*=4.96, *sd*

1.48). The effect size that is of .2 or lower is classified as having a low effect (Cronk, 2012). The

effect size for the instruments is .11.

The following Table 12, Table 13, and Table 14 show the results of the above-mentioned

information.

Table 12

*Descriptive Statistics for Self-Efficacy Construct Including Mean, Standard Deviation, and
Number*

Test	*M*	*sd*	N
SEpre1	4.31	1.59	26
SEpost1	4.08	1.23	26
SEpre2	4.62	1.24	26
SEpost2	4.96	1.48	26

Note. SEpre1=self-efficacy construct for December 2015, SEpost1=self-efficacy construct for
April 2016, SEpre2=self-efficacy construct for September 2016, and SEpost2=self-efficacy
construct for December 2016

Table 13

Mauchly's Test for Sphericity Including Significance and Degrees of Freedom

Measure: MEASURE_1					Epsilonb		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	*df*	*p*	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
SE	0.65	10.24	5.00	0.07	0.82	0.91	0.33

p≤05

Table 14

Tests of Within-Subjects Effects for Self-Efficacy Construct Significance and Degrees of Freedom

Source		Type III Sum of Squares	df	M²	F	p	Partial Eta Squared	Noncent. Parameter	Observed Powera
SE	Greenhouse-Geisser	11.49	2.45	4.69	3.18	0.04	0.11	7.8	0.65
	Greenhouse-Geisser	90.26	61.25	1.47					

p≤.05

Because the ANOVA results for self-efficacy were significant, a post-hoc analysis was completed. One way to complete this post-hoc analysis is to conduct a protected dependent *t* test with repeated-measures ANOVA. To conduct the protected *t* tests a comparison of December 2015 to April 2016 and April 2016 to September 2016 and September 2016 to December 2016, using paired-samples *t* tests. A significance level of .05 is used. Results indicate that the comparisons from two of the three test instruments were not significant. Follow-up protected *t* tests revealed that scores remained constant during the first three administrations and increased during the last administration of the ATSBI in December 2016 for the self-efficacy construct. As the following Table 15 shows the mean and standard error scores from all four instruments. As shown in Table 15 there is a significant difference from September 2016 to December 2016. See the following Table 15 for results.

Table 15

Paired Samples Test for the Self-Efficacy Construct for each of the Administration Periods of the ATSBI Including the Mean, Standard Deviation, Degrees of Freedom, and Significance

	M	*sd*	*SEM*	95% Confidence Interval of the Difference Lower	Upper	*t*	*df*	*p*
SEpre1 - SEpost1	0.23	1.77	0.35	-0.49	0.95	0.66	25.00	0.51
SEpre1 - SEpre2	-0.31	1.23	0.24	-0.80	0.19	-1.28	25.00	0.21
SEpre1 - SEpost2	-0.65	1.87	0.37	-1.41	0.10	-1.78	25.00	0.09
SEpost1 - SEpre2	-0.54	1.24	0.24	-1.04	-0.04	-2.21	25.00	0.04
SEpost1 - SEpost2	-0.88	1.58	0.31	-1.52	-0.25	-2.85	25.00	0.01
SEpre2 - SEpost2	-0.35	1.50	0.29	-0.95	0.26	-1.18	25.00	0.25

p≤.05
Note. SEpre1=self-efficacy construct for December 2015, SEpost1=self-efficacy construct for April 2016, SEpre2=self-efficacy construct for September 2016, and SEpost2=self-efficacy construct for December 2016

Research question 1

The question "Does having an instructor present information on stress and stress

reduction techniques over the course of a semester affect student level of burnout as measured by

the ATSBI?" a repeated-measures ANOVA was completed to determine statistical significance.

The results from the overall score reveal the Mauchly's test for sphericity was not significant,

therefore, sphericity could not be assumed. Consequently, the Greenhouse-Geisser test was

reviewed for statistical significance. The Greenhouse-Geisser test revealed a statistical

significance (p=.04). Because the Greenhouse-Geisser was statistically significant, a post hoc test

was completed and it revealed no statistical significance during this time period (p=.51). This

analysis reveals that the stress-reducing strategies and techniques presented to this group of

athletic training students did not assist them as they dealt with their self-efficacy when

completing the ATSBI in April 2016. Consequently, the information presented to this group of

athletic training students did not impact them. Therefore, the null hypothesis for the first research question is retained.

Research question 2

For the second research question: "Does requiring students to practice and report stress reduction techniques over the course of a semester affect student level of burnout as measured by the ATSBI?", the data was analyzed from the SE construct of the ATSBI in September 2016 as compared to December 2016. A repeated-measures ANOVA was completed to determine statistical significance. The results from the SE construct reveal the Mauchly's test for sphericity was not significant therefore sphericity could not be assumed. Consequently, the Greenhouse-Geisser test was used for statistical significance. The Greenhouse-Geisser test revealed statistical significance (p=.04). Because the Greenhouse-Geisser was statistically significant, a post hoc test was completed and it revealed no statistical significance for the time period between September 2016 and December 2016 (p=.24). This reveals the students' self-efficacy was not impacted between December 2016 and September 2016. Therefore, the stress reducing strategies and techniques did not assist this group of athletic training students when completing the ATSBI at the end of the semester. Consequently, the stress reducing strategies and techniques that were provided to them over the course of the semester did not significantly assist this group of students in their self-efficacy. Therefore, for this group of athletic training students, the null hypothesis is retained.

Qualitative Analysis

The qualitative data was compiled from the Minute Papers the athletic training students completed on a weekly basis. The Minute Papers consisted of two open-ended questions: "What was most useful on the technique that was utilized this week?" and "How could you

incorporate this technique into your daily life?" Thus, after each stress reducing technique was applied, feedback was provided by the students. Therefore, through the collection of information, the researcher knew whether or not the students applied the stress reducing strategy and technique and what they thought about that particular strategy and technique. The open-ended questions were then analyzed and coded for themes. This was a way for the researcher to cluster the comments from the students for each of the stress reducing strategies and techniques. The coding process consisted of putting all of the answers for each question and each stress reducing strategy and technique on paper. Once the questions were sorted by a question and stress reducing strategy and technique; the answers that appeared more than two times were listed as recurring themes for that question and that particular stress reducing strategy and technique. Therefore, specific themes emerged for each question and for each stress reducing strategy and technique. The themes for each question and each stress reducing strategy and technique are listed below. The themes are displayed after the question under each of the stress reducing strategies and techniques in order of the most common theme to the least common theme. For example, the first answer listed is referenced most by the athletic training students in their Minute Papers. The themes for the athletic training student responses for each of the stress reducing strategy and technique are described in the following paragraphs. The stress reducing techniques are presented in the order they occurred during the semester.

Time usage chart and schedule

A Minute Paper assessment for the time usage chart and schedule (Appendix G and I) was coded. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique that was utilized this week?" the participant responses were comprised of five themes: time management, weekly schedule, understanding, phone

apps, and avoidance. The students reported a better understanding of how they spend their time during the course of the week when referencing the time usage chart. The themes revealed the students like the accountability for the schedule by the responses: time management and weekly schedule. Students were creative and found apps for their phones that would help them keep their schedule and maintain accountability. The theme avoidance referenced the athletic training students being unable to avoid tasks if they stuck to their schedule. For the question: "How could you incorporate this technique into your daily life?" the participant responses were comprised of six themes: organization, time management, planner, study time, and time for myself. The student's themes that emerged clarify that they enjoy the planner and schedule as it allows them to manage their time better which includes planning out study sessions and time for themselves. One student stated they used the time to take part in Bible study.

Stress diary

A Minute Paper assessment for the stress diary (Appendix I) was coded. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique that was utilized this week?" the participant responses comprised five themes: time management, support, document, understanding, and awareness. The students reported a new found view on how to view stress in regards to the themes: documenting, understanding, and awareness. For example, the athletic training student was able to reflect on their stress, what the cause was, and how to overcome the stressful situation. The students reported, like the previous stress reducing strategy, time management was beneficial in this process. One participant reported a realization of not being a stressful person. For the question: "How could you incorporate this technique into your daily life?" the participant responses comprised four themes: lists, recording, experience, and reflection. The students reported that listing and

recording the stressful experiences will help them reflect on the situation and figure out how to have a better experience the next time the stressful situation arises. One student responded they plan to take 20-minute breaks to assist with stress.

SMART goal

A Minute Paper assessment for the Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART) goal (Appendix J) was coded. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique that was utilized this week?" the participant responses comprised five themes: helpful, goal setting, structure, reflection, and planner. The students reported this process as being helpful in determining specific goals for stress reduction. The students enjoyed having a structure that allowed them to reflect and plan for stress. The athletic training student responses consistently reported that the SMART goal technique was the most beneficial in assisting the student with stress reducing techniques. For the question: "How could you incorporate this technique into your daily life?" the participant responses comprised six major themes: schedule, goals, preparation, reflection, organization, and healthy lifestyle. The students reported again that having the schedule and preparing goals assisted them with the organization. Students reported this stress reducing technique was beneficial in reflecting on their stress. Some students also reported they found this most useful in helping them stay healthy, whether or not it was exercising or monitoring their eating during stressful times. Most participants had a plan on how to continue to use stress reducing techniques. One participant reported they did not have a mental breakdown, so the planning was working.

Imagery

A Minute Paper assessment for imagery (Appendix J) was coded. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique that was utilized this week?" the participant responses comprised six themes: positive, visualization, relaxation, goals, lists, and breaks. The students reported having a positive experience using imagery. They also reported the visualization and relaxation were ways to take a mental break from the stresses of studying. The goals and lists formatting was an easy way for the athletic training students to maintain accountability for the goals. A few participants reported that this technique caused them more stress; on the other hand, one student commented that "it opened up my happy endorphins." For the question: "How could you incorporate this technique into your daily life?" the participant responses comprised five themes: positive attitude, goals, practice, reflection, and time management. The students reported having a positive attitude allowed them to reduce stress. The goals they set were helping to maintain a schedule and assisted in their planning. Imagery helped the athletic training students practice stress reducing strategies and reflect on their stress. This stress reducing strategy also assisted in time management as it was a way for them to stay accountable. Some participants had extraneous factors that affected their stress levels during the week prior to completing the Minute Paper. For example, one Minute Paper reported on having eight tests during that week. One student reported they used imagery prior to going to bed to assist with stress.

Coloring

A Minute Paper assessment for coloring was coded. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique

that was utilized this week?" the participant responses comprised of three themes: relaxation, fun, and distraction. The students reported that this was a relaxing and fun way to relieve stress. Students also reported it was a distraction for them so they would not stress. One participant commented that he/she focused on the coloring task and being a perfectionist rather than letting the activity be a relaxing experience. For the question: "How could you incorporate this technique into your daily life?" the participant's responses comprised three themes: relaxing, clear mind, and study breaks. The students reported they would continue to be able to relax and clear their mind with this stress-reducing strategy. The students also reported they would color during their study breaks to help with stress reduction. One participant did not report that the technique would be beneficial; however, most felt they would try to do the activity more often, especially during stressful times.

Music

A Minute Paper assessment for music was coded. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique that was utilized this week?" the participant responses comprised of three themes: relaxing, improving mood, and focusing. The students reported listening to music was relaxing as it helped them forget about their stresses. Other students reported the music helped to improve their mood when dealing with stress. Some students reported by listening to music they were able to focus on their studies more. The participants were in agreement this was an easy technique to implement and was beneficial. For the question: "How could you incorporate this technique into your daily life?" the participant responses comprised of two themes: time for self and listening. The students reported they felt when they listened to the music it took them away from their worries and stressors. Students reported the action of listening was beneficial

in stress reduction. One participant stated they found jazz particularly stress relieving. Most of the participants agreed this was a great technique to help them relax; the few that did not enjoy the activity reported that it was distracting.

To-do list and positive thinking

A Minute Paper assessment for the to-do list and positive thinking (Appendix K and Appendix L) was coded. The students completed only one Minute Paper for both of these activities. Therefore, the researcher can predict by some responses which stress reducing strategy the student was referring to but cannot assume all of the responses. Consequently, for reporting purposes, they will be combined. The following are the coded responses from the Minute Papers. For the question: "What was most useful on the technique that was utilized this week?" the participant responses comprised of five themes: organization, positive thoughts, documenting, control, and prioritizing. The students reported this was a great way to stay organized which assisted in stress reduction. The students also reported having positive thoughts and documenting the positive thoughts was beneficial. This action made the students in control of what they were thinking and to change the negative thoughts into positive thoughts. The students reported the ability to prioritize their tasks for the week and made them realize the tasks that were of high importance that needed to be completed first. A few participants reported that the activity increased their stress; however, the majority reported that it was beneficial. For the question: "How could you incorporate this technique into your daily life?" the participant responses comprised of two themes: prioritizing and positive. The participants reported the action of prioritizing tasks was most beneficial in keeping them organized, which assists in stress reduction. The students reported positive thinking was much

more beneficial in stress reduction than other strategies. A few participants already used this technique. One student commented they were going to prioritize their tasks every morning.

SWOT analysis

A Minute Paper assessment for the Strengths, Weakness, Opportunity, and Threats (SWOT) analysis (Appendix M) was coded. The following are the coded responses from the Minute Papers. For the question "What was most useful on the technique that was utilized this week?" the participant responses comprised of two themes: improving strengths and process of identifying. The students reported they would focus more on improving their strengths to assist them with stress reduction. The students also reported the process of completing all of these areas helped them identify their strengths, weaknesses, opportunities, and threats. Those that enjoyed the activity identified future opportunities. For the question: "How could you incorporate this technique into your daily life?" the participant responses comprised of four themes: understanding, appreciating, strengths, and relaxing. The participants reported they had an appreciation for all of the areas and the process helped them to understand what they had to offer in each of the four categories. The students reported they enjoyed focusing on their strengths and this assisted them in relaxing from all the stressors. The consensus was to learn to play to their strengths. One student reported they would try to use this more often to view threats.

Final minute paper

The final Minute Paper assessment (Appendix N) included information for the athletic training students to rate on a one to eight scale, which stress-reducing strategy was most beneficial for them. The rating scale defined one as most beneficial and eight as least beneficial. This allowed the students to rank the stress reducing strategies and techniques from most useful

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to least useful. Some of the students choose not to rank some of the stress reducing strategies and techniques. The activities are listed in the order they were presented to the athletic training students.

This information exhibits relevance for each of the stress reducing strategies and techniques according to this group of athletic training students. This group of athletic training students felt listening to music was the most beneficial. This strategy is easy to complete and can be performed almost anywhere most any time, and by most people. Therefore, using this strategy to assist in stress reduction was a beneficial way for this group of athletic training students to reduce stress. The to-do list and positive thinking were also a top strategy for this group of athletic training students in stress reduction. Because there were two stress reducing activities completed in the same week and only one minute paper was completed there is no way to tell which one was most beneficial. Therefore, the information that is discussed and presented entails both of the stress reducing strategies. The to-do list assisted the students in prioritizing their tasks for the day to help them stay on track. The athletic training students have many responsibilities including clinical experiences, homework, class time, lab time, and any other responsibilities. Therefore, this strategy was effective in assisting this group of students to prioritize their daily duties. The positive thinking assisted this group of athletic training students to turn their negative thoughts into positive thoughts. This exercise promotes a positive attitude and helps in avoiding the negative thoughts. As previously mentioned these two items were combined during one week and not divided into two separate minute papers. Therefore, one of the strategies may have been more effective than the other. It is not known to the researcher if one was more effective than the other. However, both of these strategies can be incorporated into the daily lives of anyone feeling stressed, overwhelmed, or continually exhibiting negative thoughts.

Another stress-reducing strategy that this group of athletic training students felt was useful was coloring. Again, this is easy to implement for most anyone, almost anywhere, and almost anytime. The technique was deemed as relaxing and a way to disengage from a strenuous schedule. The students were able to color prior to exams as a way to relieve test anxiety. The last stress reducing strategy and technique that was noted as effective was the time usage chart and schedule. Again, this had two different items attached to one minute paper. Therefore, it is not known to the researcher if one was more beneficial than the other. The time usage chart sheet gave this group of athletic training students a way to review how many hours are in a week and whether they are using their time effectively. Many reported being surprised that they had hours left in the week because they assumed they were very busy. Therefore, this group of athletic training students limited the amount of complaining about how busy they were and dedicated the hours needed for their studies. The schedule was a way for this group of students to document hour by hour what responsibilities they had or where they were to be over the course of the day and during the week. This is an effective strategy for anyone to use. This visually determines where one needs to be during the course of the week. However, making a schedule takes time. Consequently, some may think that the time is not worth the effort.

Table 16 below reports the percentages of the athletic training students that rank order each stress reducing strategies or technique by its usefulness from most to least. Because some students did not provide a score for some of the stress reducing strategies the total will not add up to a 100%. See the following Table 16 for the results.

Table 16

Percentage of Athletic Training Students Reporting the Rank Order of Each Activity

Activity	Most	Second	Third	Fourth	Fifth	Sixth	Seventh	Least	Total
Time usage	12.5	12.5	20.0	17.5	2.5	10.0	10.0	10.0	95.0
Stress diary	5.0	2.5	10.0	10.0	27.5	12.5	12.5	15.0	95.0
SMART goals	7.5	10.0	7.5	17.5	25.0	17.5	10.0	2.5	97.5
Imagery	2.5	7.5	20.0	7.5	12.5	17.5	17.5	7.5	92.5
Coloring	10.0	25.0	10.0	20.0	2.5	10.0	7.5	10.0	95.0
Music	37.5	20.0	12.5	5.0	5.0	10.0	2.5	2.5	95.0
To-do list/positive thoughts	25.0	12.5	22.5	10.0	10.0	10.0	7.5	0.0	97.5
SWOT Analysis	0.0	7.5	2.5	5.0	7.5	5.0	22.5	42.5	92.5

Gallup Student Poll

The Gallup student poll (GSP) contained 21 questions. This survey was used because of its relationship to stress and burnout. The GSP surveys numerous students from public institutions between the grades of 5 to 12 (Gallup, 2014). This is a national survey which uses a five-point Likert scale as follows: 1-strongly disagree; 2- disagree; 3-neither agree nor disagree; 4-agree; and 5-strongly agree. This survey measures engagement, hope, and well-being (Gallup, 2014). This poll surveys students in grades 5-12 and results for the means, frequencies, and percentages are publicized on the Gallup website (Gallup, 2014). The mean, frequency, and percentage results from the GSP were compared to the national averages for means, frequencies, and percentages from Gallup (Gallup, 2014). The survey has changed since 2014 to include different constructs. For this research, the survey from 2014 was administered to this group of athletic training students. Therefore, results from the GSP national survey for 2014 were compared to the mean scores of the athletic training students.

GSP Descriptive Statistics

Descriptive statistics were completed for the GSP. This information was compared to the national average. The year 2014 was used for analysis as that was the instrument that was used for the athletic training students. The mean score was used for comparison because it was available to the researcher on the Gallup website and this is the year from which the researcher used the GSP (Gallup, 2014). The national scores reveal as the students get further along in school the less engaged the students are in school. The mean scores over time show a decline. The same inferences can be made for college students.

The questions from each of the three constructs (hope, engagement, and well-being) were analyzed using a one sample t-test. The test value was the grand mean score from the 12th grade year that was published by Gallup (Gallup, 2014). The 12th grade year was used as a comparison because this year is the year that is closest to the athletic training students who were of junior and senior status in college. The national trend shows the decline from 5th grade to 12th grade. This trend continues as statistically proven for the hope and well-being construct. Therefore, the college students continue to follow the trend as the national average in hope for the future and their well-being. The engagement construct demonstrates statistical insignificance for this group of athletic training students and does not follow the trend as recognized on the national GSP. Therefore, this group of athletic training are more engaged in school and potentially the idea of soon becoming an athletic training professional. See Table 17 below for each construct and the mean score, standard deviation, test value, mean difference, degrees of freedom, t-value, and an asterisk behind the t-value if that particular construct was statistically significant.

Table 17

Gallup Student Poll Constructs Mean, Standard Deviation, and Significance

Construct	M	*sd*	Test value	Mean Difference	*df*	t-value
Hope	4.19	0.53	4.4	-0.21	25	-2.05*
Engagement	3.89	0.66	3.73	0.15	25	1.13
Well-being	7.85	1.41	8.48	-0.64	25	-2.3*

*p<.05

CHAPTER FIVE: DISCUSSION

Chapter Four displayed and explained the results of this dissertation in practice. This chapter will start with a review of the research questions and the hypothesis. The implications for practice will be discussed. This will contain suggestions from the researcher on methods to assist in stress and prevent potential burnout. The chapter will conclude with the limitations of the study, recommendations, and a conclusion which will include implications and recommendations for future studies.

Research Questions

1. Does having an instructor present information over the course of a semester on stress and stress reduction techniques affect the students' level of burnout as measured by the ATSBI?

2. Does requiring students to practice and report stress reduction techniques affect the students' level of burnout as measured by the ATSBI?

3. What stress reduction techniques did the athletic training students report most useful?

4. How do measures of hope, engagement, and well-being for this group of athletic training students compare to national averages as reported on the Gallup student poll?

Discussion

Athletic training students are the future for the profession of athletic training. Therefore, if students do not complete their degrees and work well into their seasoned years, the athletic training profession as a whole will suffer. Athletic training students complete challenging school work, clinical experiences, and competency/proficiency testing. All of these demands ensure students will become competent entry-level athletic training professionals when they graduate.

However, these demands may also cause students to burnout before they even enter the profession. The literature (as stated in Chapter Two) shows that burnout is real, not only for the helping professions in general but also, specifically, to the athletic training profession (Maslach & Goldberg, 1993). Stress has been noted as one of the main causes of burnout (Maslach & Goldberg, 1993). Universities that educate athletic training students need to ensure that the students are able to manage stress in order to avoid burnout. Moreover, students in these programs need to practice stress reducing strategies in order for those strategies to become innate behaviors when they are professionals. Consequently, to assist in burnout, stress needs to be addressed. While there is a great deal of information in the literature about burnout, little is reported on stress reducing strategy effectiveness against burnout (Maslach & Goldberg, 1993). Understanding what stress reducing strategies contribute to overall wellness may translate into real benefits for athletic training professionals.

This study is unique in that it examined burnout in athletic training students to ascertain whether or not stress reducing strategies and techniques would assist students to appropriately manage stress. The intent was to determine whether or not specific stress reducing strategies and/or tools helped the athletic training students reduce stress and potentially avoid burnout. The study was derived from a study utilizing the Athletic Training Burnout Inventory (ATBI) (Clapper & Harris, 2008). The ATBI was amended to create the Athletic Training Student Burnout Inventory (ATSBI) by creating questions more relevant to the student population instead of the athletic training professional. The ATSBI contained 35 questions. A group of athletic training students took the ATSBI over a course of four time periods (December 2015, April 2016, September 2016, and December 2016). The students were sophomores to seniors in an undergraduate athletic training program. The times of administration were one week before

finals for all but the September 2016 administration. There was a total of 26 athletic training students that completed all four administrations of the ATSBI. This is the data that was analyzed in Chapter Four.

It must be noted that all of the data relied on the information provided by college students. This group of athletic training students are dedicated to the University and the program, however, they are still college students. This implies that they may have rushed through answering questions when completing the various administrations of the ATSBI. There is also the brain that is continually developing at this stage and may affect their answers and their ability to properly answer some of the questions from the ATSBI. Because the researcher, an educator, and an athletic training professional, designed the ATSBI the questions still may have needed work to fully understand the brain of the student. Therefore, the ATSBI, however, proven reliable, may be developed further.

Implications for Practice

Stress and burnout need to be addressed in all helping professions, especially athletic training. The research provides compelling evidence that burnout is real for these helping professions (see Chapter Two). This research has used many different instruments to determine burnout in various professions. The researcher developed the ATSBI, which was modified from the ATBI (Clapper & Harris, 2008). This instrument should be further developed and utilized again in the investigation of athletic training students. Therefore, the refinement of the instrument will increase validity. Consequently, more questions may be used which would allow for more constructs to be developed from the instrument. Additional utilization will allow researchers to compare institution sizes, program sizes, and other demographics. Therefore, this information will allow program directors to review results to determine what they can do for

their athletic training program to assist in burnout prevention for the athletic training students. Hence, assisting the athletic training student in understanding whether or not they suffer from burnout and institute changes for that person.

Although the need to determine if burnout is real is important, there is a greater need to determine how to prevent burnout from happening. As noted in Chapter Two there are many researchers who have studied burnout and found burnout does exist (Clapper & Harris, 2008; Giacobbi, 2008; Kania, Meyer, & Ebersole, 2009; Mazerolle, Monsma, Dixon & Mensch, 2012; Maslach & Jackson, 1981; Mauzy, et al, 2015; Riter et al., 2008, Walter, et al, 2009). The results of the t-test analysis for the comparison of the ATSBI are promising for practitioners. The overall construct results from the September 2016 and December 2016 reveal statistical significance with the significance level set at $p \leq .05$. For practitioners and athletic training students, this reveals the stress reducing strategies and techniques did assist this group of athletic training students. Therefore, it was important to the researcher, as an educator for athletic training students, to investigate stress reducing strategies and techniques. This dissertation in practice utilized eight different stress reducing strategies to prevent stress and burnout for a group of athletic training students. Upon completion of this dissertation in practice, it is important to realize that everyone is different. Therefore, there is no one answer for preventing burnout for athletic training students or professionals. The imperative thing to realize is everyone needs to try multiple stress reducing strategies to find the ones that work best for them. This more than likely will involve more than one strategy. There are times where one stress reducing strategy may work and other times that another strategy may be more beneficial in relieving stress. Consequently, it is the researcher's suggestion to start with the stress reducing strategies that were found to be most beneficial for this group of athletic training students. These stress

reducing strategies and techniques include listening to music, keeping a to-do list, and maintaining positive thinking. These are all easy to do and includes organization techniques that keep one accountable. Thus, athletic training program directors should try to implement these stress reducing strategies into their programs to assist their students. The more the athletic training students practice these skills in college; the behavior will become ingrained into their lives. Therefore, the hope is to have the athletic training student continue these behaviors when they become an athletic training professional. Consequently, this may assist them as professionals and prevent burnout.

It is important to note that the athletic training standards that are being proposed by the Commission on Accreditation for Athletic Training Education (CAATE) include a standard that demands the program monitors student's time commitment in order to maintain safety and welfare for the student and patient (Commission on Accreditation of Athletic Training Education, n.d.). This is encouraging for the athletic training students as the accrediting body is recognizing the students need to be educated on time management skills in their program. This strategy, with enough practice, may be embedded in their practice as they reach professional status. Therefore, the number of athletic training professionals will hopefully increase well into their seasoned year.

The Gallup student poll is another instrument that was utilized to compare this group of athletic training students to normative values. This instrument determined the trend for this group of athletic training students followed the national average. This trend shows a decline in hope and well-being the closer the student gets to graduation. This is important information to understand so prevention strategies can be implemented into the academic rigor to assist students with the feeling of despair. Thus, it is important to continue to monitor students as stress

reducing strategies are implemented into programs. The trend, if stress reducing strategies are

implemented and practiced, may change and show more hope and well-being the closer the

athletic training students are to graduation. The engagement construct demonstrates a higher

mean score than the 12th grade national grand mean for the Gallup student poll. This is exciting

as for this group of athletic training students they are more engaged the closer they get to

graduation. Therefore, the reality of becoming an athletic training professional is an exciting

time for them thus portrayed in the engagement score. Consequently, this trend shows this group

of athletic training students are ready and excited to become athletic training professionals.

Implications for Athletic Training Professionals

One of the most important implications of burnout to the field of athletic training is the

attrition of seasoned athletic trainers. The lack of seasoned professions is detrimental to the

athletic training profession. Without these seasoned professionals, the profession as a whole will

be limited in its growth. The need for the experienced professional is important in many different

aspects of the growth and development of the profession. As athletic training moves to a master's

degree, the profession as a whole is investigating the potential to bill for services to insurance

companies. The patient satisfaction and outcomes are key in assisting the professions to push for

this to happen. The seasoned, more experienced athletic trainer will more than likely have a

higher satisfaction rating and better outcomes than a brand new graduate. Therefore, the need to

have these experienced professionals is necessary for the push for third party reimbursement.

Consequently, if the seasoned professionals are leaving the profession that will leave

inexperienced athletic trainers to provide all of the services. Therefore, the athletic training

professionals should also start with these stress reducing strategies that were found most

beneficial for this group of athletic training students to see if it assists their stress. There are

many strategies that the professional can try, these can be found on mindtools.com. Therefore, the professional should investigate additional stress reducing strategies and techniques. The young professional's group with the NATA should consider investigating stress reducing strategies for this group of professionals. This is the target group that typically leaves the profession as demonstrated by the research (Giaccobbi, 2008; Kania, Meyer, & Ebersole, 2009; Kahanov & Eberman, 2011). Hence, investigation to practice needs to continue.

An area of growth in health care is inter-professional collaboration. The new professional in all health care professions is interested in gaining experience within their profession. They typically, want to get their hands dirty and perform every task themselves. This assists the new professional to gain experience and expand their knowledge in the practice setting. Therefore, collaboration with these inexperienced professionals is limited. The seasoned professional is needed to expand these collaborative experiences and services. It is important for the healthcare team to provide services together, as that is the best service for the patient and optimal in a quick recovery. Consequently, if these seasoned professionals are on the verge of burnout or experience burnout and leave the profession, these collaborative efforts will suffer.

Retention for females is a challenge as there is a need to fulfill other duties by the female professional. This need comes from the female themselves and at times outside sources. The healthcare professions, including athletic training, need to do a better job trying to fulfill the satisfaction of the female athletic trainer. Burnout continues to affect females more than males. Therefore, the push to educate females to figure out a balance between home and work lives is important. Both educational institutions and employment agencies need to be sensitive to the needs of the female when it comes to the demands and the balance. Assisting these females in burnout prevention will assist the profession, as there is a need for the presence of female athletic

trainers. Hence, the profession will flourish with the addition of seasoned female athletic training professionals.

Limitations

There were limitations in this study, as to be expected with any study. Sample size restricts the ability to make assumptions about a large population. The participants that completed all four surveys were the only participants that were used for data analysis. The total number that completed all four surveys was 26 students. This was a smaller number than those that completed the first two surveys. This was due to the fact that there were 28 fewer students who had the opportunity to complete the last two surveys due to graduation. The data was analyzed to make assumptions about a smaller population and may or may not be representative of a larger population. Therefore, assuming what worked for this small group of athletic training students may not work for a larger group. The population that was analyzed for this study consisted of more female than male participants. As revealed in Chapter Two, the female population typically has a higher level of emotional exhaustion than males and have been known to leave the athletic training profession earlier than men due to burnout. Because of the larger female population, this may or may not have skewed the results. Another limitation regarding population is that this dissertation in practice did not focus on the difference between males and females or the academic status year of the participants. Therefore, comparisons to the literature regarding the difference between males and females cannot be utilized for this study. However, generalities about stress can be made from this population.

The timing of the administration of the ATSBI is another limitation. Three of the four administrations were delivered during high-stress times for this group of athletic training students. The administrations of December 2015, April 2016, and December 2016 were

completed one week prior to finals week. This is a time period where many projects are due and if the student has not completed clinical requirements there is added stress for them because of time constraints. The reasoning for these time periods was because the researcher knew that these were high-stress times and therefore administration of the ATSBI may reveal that the stress reducing strategies and techniques presented and utilized by this group of athletic training students was beneficial. However, when this group of athletic training students were not in a high-stress situation, during September 2016, it proved to be a better time period for administration of the ATSTBI. Hence, the data should be viewed with caution as the four administration time periods were not equivalent.

Another factor for the timing of the ATSBI was the senior group of athletic training students may experience more stress than the junior group during the December 2016 sampling. This group of students is one semester closer to graduation and closer to taking the certification exam to become a Certified Athletic Trainer (ATC). These specific life events may cause an increase in the levels of stress for this group of athletic training students who are not ready to move on to the next chapter in their lives or have uncertainties about their future. Thus, the next chapter in their lives may cause a great deal of stress and anxiety for this group of athletic training students. Therefore, the time periods of administration for the ATSBI is of questionable status.

The data in many studies rely on the involvement of the participants. This study is the same in regards to relying heavily on student involvement. A considerable amount of data for this study depended on the athletic training students completing the ATSBI and implementing the stress reducing strategies and techniques. The reader needs to keep in mind these are college students and may not have taken the stake in completing the ATSBI and reading the questions

and answering thoroughly. It was a week prior to finals and therefore, the athletic training students may have been more interested in completing the process quickly. Additionally, the data also relied on the athletic training students' honesty and actual completion of all items. The completion of the instrument relied on the athletic training students being able to utilize the stress reducing strategies and techniques they used over the course of the semester, however, this was not explained to the students prior to administration of the ATSBI. Therefore, the athletic training students may not have completed the instrument with the stress reducing strategies and techniques in mind.

The time commitment for this group of athletic training students was great. They were asked to complete eight different stress reducing strategies and techniques over the course of the semester. The researcher had no way of knowing if this was completed but instead relied on the honesty of this group of athletic training students when completing the Minute Papers. The students needed to exert effort to take the time to understand and utilize all of the stress reducing strategies and techniques. Thus, the number of participants diminished over the course of the semester in applying the stress reducing strategies and completion of the Minute Papers. The completion of the Minute Papers involved a high level of commitment from the students. Therefore, the time obligation for completing the Minute Papers increased the athletic training students' involvement and participation in the study. Consequently, if this group of athletic training students did not feel it was important to them, they did not have to use the stress reducing strategies or techniques to the fullest. There was also a time commitment to complete the ATSBI, a smaller amount of time was needed than when the students were completing the stress-reducing strategies; however, time was still a necessity. Consequently, the athletic training students could end the survey quickly if so chosen or click on any answer without understanding

the question. Therefore, the results may have been skewed. It is, however, the researchers' opinion that even though the participants are college students there were many that completed the Minute Papers with thoughtfulness and deliberation. The stress reducing strategies that were most effective for the athletic training students the research noted they completed the minute paper more thoughtful. More participants completed the Minute Papers for these particular strategies. Therefore, the most beneficial stress reducing strategies contained richer information.

The delivery of the stress reducing strategies and tools was interrupted by snow storms that caused the university to close for two weeks in a row. This closing was at the end of the semester when the students were busy with end of the year projects and studying for finals. The snow storms compounded an already high-stress time. Furthermore, the SWOT (Appendix M) analysis required more time for completion than other stress reducing strategies. Thus, the SWOT analysis was the least utilized of all of the stress reducing strategies. This limits the judgments that can be made regarding the usefulness of the SWOT analysis in stress reduction. However, the fact that the students did not choose to use this strategy when already feeling stressed may only speak to its utilization in stress reduction. Therefore, the effectiveness for stress prevention cannot be ascertained from this study.

Conclusion

This dissertation in practice was a way for the researcher to investigate stress reducing strategies and techniques that may be beneficial for the reduction of stress and burnout. Many research studies indicate there is burnout in the helping professions and students of the helping professions; however, very few investigate what can assist these groups to avoid burnout. Therefore, the researcher argues it was important to investigate what could assist this group of athletic training students to reduce stress. The results reveal many statistical insignificance. The

statistical analysis shows there is a significant difference between the levels of stress at the beginning of the semester as compared to the end of the semester for the self-efficacy construct. The stress levels were lower at the beginning of the semester as compared to the end of the semester. This information verifies assumptions the researcher had for this time period and this group of athletic training students. Therefore, when completing a stress or burnout instrument this time period should be used for a control time period of low stress.

The qualitative portion of the data was also analyzed and a great deal of relevant information was gleaned. The five stress-reducing strategies that this group of athletic training students reported most relevant include: listening to music, time usage chart and schedule, coloring, to-do list, and positive thinking. Therefore, the researcher plans to continue to utilize these relevant stress reducing strategies with athletic training students and preceptors. Furthermore, the researcher plans to suggest that all faculty incorporate these stress reducing strategies and techniques prior to exams and when the students are at a high-stress time.

Implications for Future Research

Past research studies have demonstrated that athletic trainers, as both professionals and students, display signs of burnout, as explained in Chapter Two. Thus, the important question is to find out what stress reducing strategies and techniques are most beneficial for the athletic training professional and/or student. These stress-reducing strategies and techniques should be utilized during stressful time periods for either the professional or the student. Because this is a long-term problem further research is needed to establish best practices regarding burnout for the professional and the student. While this research answered some questions and gleaned information for prevention strategies for stress; further work needs to be done to assist this group of athletic training professionals and students.

The ATSBI, the instrument that was used in this research study, needs to be researched with a larger population to see if the results are similar or different. Different parts of the United States, different types of schools, and varying sizes of institutions need to be investigated. This needs to be completed to verify the results of this study and also to generalize the findings to a larger population. Therefore, this instrument should be utilized in many athletic training programs with both undergraduate and graduate students being surveyed. The results from a larger population would glean insight for the entire athletic training population. In addition, if results are conclusive the accreditation body can find ways to assist the students early on and look for prevention strategies for stress and burnout in the athletic training professionals and students.

The athletic training students, as any college student, have typically high-stress times at the end of the semester. If high-stress times, such as the end of the semester, are utilized for the administration of the instrument the researcher should engage the students in stress reducing strategies prior to the administration. This engagement would allow the researcher to see if the stress reducing strategies and techniques are beneficial. Therefore, the implementation and the process of utilizing the stress reducing strategies at all times is more important. In addition to the high-stress times, the researcher would suggest an investigation on lower stress times, mid-term exams for example, when measuring the effectiveness of stress reducing strategies and techniques. The researcher suggests that the instrument to assess stress and burnout should be completed at a time during the semester when the students have more tests in a given week. Therefore, a true measurement of the implementation of the students effectively utilizing the stress reducing strategies could be measured. Thus, new research studies should focus on measuring burnout during higher stress times, but not the extreme, as in the end of the semester.

Furthermore, the measurement of burnout should coincide with one or more stress reducing strategies and techniques.

Stress reducing strategies should continue to be investigated. This research study focused on eight weeks of interventions. Chapter Four discussed the stress reducing strategies that were most beneficial for this group of athletic training students. Four of the eight weeks of interventions proved more relevant for managing stress. Therefore, future research studies should include utilizing stress reducing strategies and techniques that are similar to the four weeks most beneficial stress reducing strategies and techniques from this research and incorporate new stress reducing strategies and techniques. Future research should include all eight stress reducing strategies and investigate other stress reducing strategies not used in this research. In addition, these stress reducing strategies should be implemented with athletic training professionals. This information could be imperative to the longevity of the practicing athletic trainers. This information would assist to verify the benefit of the stress reducing strategies and techniques found relevant from this study and to reveal new stress reducing strategies that may assist professionals or athletic training students with stress and burnout. Therefore, this researcher feels there is a need to continue to investigate burnout prevention. Furthermore, these stress reducing strategies and techniques should be studied with other helping professions and students studying to become healthcare workers.

The need to investigate those professionals who are at the verge of leaving the profession or have left the profession due to burnout need to be investigated. Interviews for these professionals should be completed along with trials of stress reducing coping strategies to investigate if those assist in their level of burnout. Therefore, the profession as a whole can distribute stress reducing strategies that assist some professionals on the verge of burnout in

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order to assist others in experiencing burnout. These stress reducing strategies should then be incorporated into athletic training programs. Consequently, the athletic training students will learn these stress reducing strategies prior to beginning in the profession. There also needs to be interviews with seasoned athletic trainers and how they have avoided burnout. This information would be relevant in assisting other professionals and athletic training students in techniques to avoid burnout. Therefore, the end result would be more practicing professionals.

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APPENDIX A. IRB APPROVAL NDSU

NDSU NORTH DAKOTA
STATE UNIVERSITY

December 7, 2015

Dr. Claudette Peterson
School of Education

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #HE16133 , "Burnout prevention strategies for Athletic Training Students"

Co-investigator(s) and research team: Rachel Johnson Krug

Certification Date: 12/7/2015   Expiration Date: 12/6/2018
Study site(s): University of Mary, Bismarck
Sponsor: n/a

The above referenced human subjects research project has been certified as exempt (category # 2b) in accordance
with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This
determination is based on the original protocol submission with updated training (received 12/7/2015).

Please also note the following:
☐ If you wish to continue the research after the expiration, submit a request for recertification several weeks prior
to the expiration.
☐ The study must be conducted as described in the approved protocol. Changes to this protocol must be
approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
☐ Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to
subjects or others related to this project.
☐ Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB
standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,

Digitally signed by Kristy Shirley
DN: cn=Kristy Shirley, o=NDSU,
ou=Institutional Review Board,
email=kristy.shirley@ndsu.edu, c=US
Date: 2015.12.07 14:46:23 -06'00'

Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult
http://www.ndsu.edu/research/integrity_compliance/irb/. This Institution has an approved FederalWide
Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

NDSU is an EO/AA university.

NDSU NORTH DAKOTA
STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD
office: Research 1, 1735 NDSU Research Park Drive, Fargo, ND 58102
mail: NDSU Dept. #4000, PO Box 6050, Fargo, ND 58108-6050
p: 701.231.8995 **f:** 701.231.8098 **e:** ndsu.irb@ndsu.edu **w:** www.ndsu.edu/irb

Protocol Amendment Request Form

Changes to approved research may not be initiated without prior IRB review and approval, except where necessary to eliminate apparent immediate hazards to participants. Reference: *SOP 7.5 Protocol Amendments.*

Examples of changes requiring IRB review include, but are not limited to changes in: investigators or research team members, purpose/scope of research, recruitment procedures, compensation strategy, participant population, research setting, interventions involving participants, data collection procedures, or surveys, measures or other data forms.

Protocol Information:

Protocol #: **#HE16133**   Title: **Burnout prevention strategies for athletic training students**

Review category: ☒ Exempt   ☐ Expedited   ☐ Full board
09/17/15
Principal investigator: **Claudette Peterson**   Email address: **claudette.peterson@ndsu.edu**
Dept: **School of Education**
12/07/15
Co-investigator: **Rachel Johnson Krug**   Email address: **rakrug@umary.edu**
Dept:

Principal investigator signature, Date: *Claudette Peterson (email) 7/27/2016*

In lieu of a written signature, submission via the Principal Investigator's NDSU email constitutes an acceptable electronic signature.

Description of proposed changes:

1. Date of proposed implementation of change(s)*: **after approval**
   * Cannot be implemented prior to IRB approval unless the IRB Chair has determined that the change is necessary to eliminate apparent immediate hazards to participants.

2. Describe proposed change(s), including justification:
   After collecting data in Spring 2016 according to the protocol, we wish to repeat the data collection in Fall 2016 according to the same previously-approved protocol in order to include more participants. We would use the same invitation and informed consent form but will change Spring 2016 to Fall 2016. The University of Mary IRB will be updated to include this change.

Protocol Amendment Request Form
NDSU Institutional Review Board
Form revised May 2015

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3. Will the change(s) increase any risks, or present new risks (*physical, economic, psychological, or sociological*) to participants?

☒ No

☐ Yes: *In the appropriate section of the protocol form, describe new or altered risks and how they will be minimized.*

4. Does the proposed change involve the addition of a vulnerable group of participants?

Children: ☒ no ☐ yes – include the *Children in Research* attachment form

Prisoners: ☒ no ☐ yes – include the *Prisoners in Research* attachment form

Cognitively impaired individuals: ☒ no ☐ yes*

Economically or educationally disadvantaged individuals: ☒ no ☐ yes*

   *Provide additional information where applicable in the revised protocol form.

5. Does the proposed change involve a request to waive some or all the elements of informed consent or documentation of consent?

☒ no

☐ yes – 🔲 Attach the *Informed Consent Waiver or Alteration Request.*

6. Does the proposed change involve a new research site?

☒ no

☐ yes

🔲 **If information in your previously approved protocol has changed, or additional information is being added, incorporate the changes into relevant section(s) of the protocol. Draw attention to changes by using all caps, asterisks, etc. to the revised section(s) and attach a copy of the revised protocol with your submission.** (*If the changes are limited to addition/change in research team members, research sites, etc. a revised protocol form is not needed.*)

Impact for Participants (future, current, or prior):

1. Will the change(s) alter information on previously approved versions of the recruitment materials, informed consent, or other documents, or require new documents?

☐ No

☒ Yes – 🔲 attach revised/new document(s)

2. Could the change(s) affect the willingness of *currently* enrolled participants to continue in the research?

☒ No

☐ Yes – describe procedures that will be used to inform current participants, and re-consent, if necessary:

3. Will the change(s) have any impact to *previously* enrolled participants?

Protocol Amendment Request Form
NDSU Institutional Review Board
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$\boxtimes$ No
$\square$ Yes - describe impact, and any procedures that will be taken to protect the rights and welfare of participants:

- - - - - - - - - -FOR IRB OFFICE USE ONLY - - - - - - - -

Request is: $\boxtimes$ Approved $\quad \square$ Not Approved
Review: $\boxtimes$ Exempt, category#: _2b_ $\quad \square$ Expedited method, category # ____ $\quad \square$ Convened meeting, date: _____ $\square$ Expedited review of minor change

IRB Signature: _Kristy Shirley_	Date: _7/29/2016_
Comments:	

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NDSU Institutional Review Board
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APPENDIX B. IRB APPROVAL UNIVERSITY OF MARY

University of Mary
INSTITUTIONAL REVIEW BOARD
Human Subjects Review
Part 4: Institutional Review Board Action

Project Title: Burnout Prevention Strategies for Athletic Training Students Project ID#: _593120215_

Project Advisor/Principle Investigator: _Rachel Johnson Krug/Rachel Johnson Krug_

___X___ The Institutional Review Board *approves* this project for the ethical use of human subjects.

Additional Comments: _expedited_

_____ The Institutional Review Board does not approve the proposed project based on the following reasons:

Recommendation:

Signatures:

Signature	Date	Approve/Not Approved
IRB Chair	12-2-15	X Approve __ Not Approved
IRB Member	Date	__ Approve __ Not Approved
IRB Member	Date	__ Approve __ Not Approved
IRB Member	Date	__ Approve __ Not Approved
IRB Member	Date	__ Approve __ Not Approved

Reviewed 04/28/06; 05/25/07

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UNIVERSITY *of* **MARY**

Subject: OFFICIAL COMMUNICATION: IRB Proposal 593120215.2

IRB Proposal 593120215.2 - continuation: Burnout Prevention Strategies for Athletic Training Students Dear Investigator,

The University of Mary Institutional Review Board has reviewed and approved the above referenced study. This approval is valid for 12 months from today's date.

Conditions of Approval: There are six (6) conditions attached to all approval letters. All six conditions must be met, or the IRB's approval may be suspended.

1. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date. (Principal Investigators and Sponsors are responsible for initiating Continuing Review proceedings.)
2. All unanticipated or serious adverse events must be reported to the IRB.
3. All protocol modifications must be IRB approved prior to implementation, unless they are intended to reduce risk. This includes any change of investigator or site address.
4. All protocol deviations must be reported to the IRB within 14 calendar days.
5. All recruitment materials and methods must be approved by the IRB prior to being used.
6. The IRB must be notified upon completion of the project.

Principal investigators are responsible for making sure that studies are conducted according to the protocol and for all actions of the staff and sub-investigators with regard to the protocol. As a principal investigator, you may have multiple and possibly conflicting responsibilities to the IRB, the research subjects, and any sponsor. If you have any questions or concerns about this approval, please contact the IRB Chairperson, in the Department of Occupational Therapy Office.

Sincerely,

Carol H Olson

Carol Olson, PhD, OTR/L, FAOTA Chair, Institutional Review Board Professor
University of Mary 7500 University Drive
Bismarck, ND 58504
T: 701.355.8156
F: 701.255.7687
olsonc@umary.edu

You are invited to participate in the research study "Burnout Prevention Strategies for Athletic Training Students". You have been selected to participate in this study because you are an athletic training student.

By participating in this research you may interact with the principle investigator, Rachel Johnson Krug. Dr. Claudette Peterson, Assistant Professor in the Educational Doctoral program at North Dakota State University (NDSU) will be supervising this research.

The purpose of the study is to implement stress reduction exercises and tools utilizing undergraduate athletic training student's personal strengths to see if the student's stress level is lower than the previous semester. The goal is to establish affective strategies to allow athletic training students to handle stress more effectively.

You understand that this research is intended to assist the researchers in the improvement of athletic training program teaching techniques. There are minimal risks associated with this study. These risks may be psychological or social as there be implementations of certain strategies that may make you feel uncomfortable. There will be every effort to minimize the risks for you during the study.

As a participant in this study, you will complete the Athletic Training Student Burnout Inventory (ATSBI) and the Gallup's Strength Finder in December 2015, one week prior to finals for Fall semester. This process will take approximately 60 minutes. Over the course of the Spring semester implementation strategies utilizing your strengths and tools to assist with stress reduction will be taught. At the end of the spring semester in April 2016, again one week prior to finals you will be asked to complete the same survey. This procedure will last approximately 30 minutes.

You understand that the athletic training programs may benefit from your participation through a greater understanding of strategies to prevent burnout in an athletic training program. You personally may benefit from the knowledge gained using your personal strengths and how this may assist you with stress management. You understand that every effort will be made to protect your identity. Your responses will be collected separately from your consent form by someone other than the researcher and sent directly to the researcher's advisor. You will be referenced as a code that you will generate at the bottom of the consent form. The documents

from this research will be held in a secure location by the researchers for a period of three years from the conclusion of this study. Only the researcher and Dr. Peterson will have access to the original materials. While a summary of the study may be published and/or shared at a conference, no identifying data from individual respondents shall be presented.

Individual information you provide will be confidential and generally will not be shared with others unless you provide written consent. However, the North Dakota State University Institutional Review Board has the authority to inspect consent records and data files, which will be collected separately, to assure compliance with approved procedures.

You understand that all participation is voluntary and that refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or loss of such benefits mentioned above.

For any questions regarding this research, you may contact:

Rachel Johnson Krug	Dr. Claudette Peterson
Doctoral student	Assistant Professor
NDSU School of Education	NDSU School of Education
210 Family Life Center	216C Family Life Center
Fargo, ND 58108	Fargo, ND 58108
701-319-0109	
rakrug@umary.edu	

You have rights as a research participant. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program at 701.231.8995, toll-free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108-6050.

Please answer the following questions for confidentiality:

First letter of mother's first name? M-Mary **M**   _____

Number of older brothers (living and deceased)? 01-one **01**   _____

Number representing the month you were born? 05-May **05**   _____

First letter of middle name (if none, use X) A-Ann **A**   _____

Subject-Generated Identification Code **M0105A**

Please write your 6 character code here_____.

Thank you for your taking part in this research

_____   _____

Printed Name   Date

_____   _____

Signature   Date

_____   _____

Signature of researcher   Date

APPENDIX D. ATSBI

Please create your own personal code using the information and examples below.

First letter of mother's first name? M-Mary M _____
Number of older brothers (living and deceased)? 01-one 01 _____
Number representing the month you were born? 05-May 05 _____
First letter of middle name (if none, use X) A-Ann A _____
Subject-Generated Identification Code Example: M0105A

Place your personalized six character code here:

[   ]

What is your gender?
○ Male
○ Female

What year are you in the program?
○ Sophomore
○ Junior
○ Senior

I am one of the best students in my class?
○ Yes
○ No

I am very involved in activities, such as clubs, music, sports, or something else?
○ Yes
○ No

I feel emotionally drained from my schoolwork.
○ Never true
○ Sometimes not true
○ Mostly not true
○ Sometimes true
○ Mostly true
○ Always true

I feel used up at the end of the school day.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I feel tired/fatigued when I get up in the morning and have to face another day at school.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

School and clinical responsibilities all day are a strain for me.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I can effectively solve problems that arise at school.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I feel burnout out from school.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I feel I am making an effective contribution to the athletic training program.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I have become less interested in school.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I have become less enthusiastic about school.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I feel exhilarated when I accomplish something at school.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I prefer to do my school work alone.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I have become more cynical about whether my contribution counts for anything.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I doubt my knowledge.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes true

○ Mostly true

○ Always true

I feel confident that I am effective at getting things done.

- ○ Never true
- ○ Sometimes not true
- ○ Mostly not true
- ○ Sometimes true
- ○ Mostly true
- ○ Always true

I feel depressed at school.

- ○ Never true
- ○ Sometimes not true
- ○ Mostly not true
- ○ Sometimes true
- ○ Mostly true
- ○ Always true

I feel I have a support system at school and home.

- ○ Never true
- ○ Sometimes not true
- ○ Mostly not true
- ○ Sometimes True
- ○ Mostly true
- ○ Always true

I feel there is enough time in the day to accomplish everything for school.

- ○ Never true
- ○ Sometimes not true
- ○ Mostly not true
- ○ Sometimes True
- ○ Mostly true
- ○ Click to write Choice 6

I feel overwhelmed on a daily basis.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel I have good time management skills.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I enjoy working with others.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel emotionally exhausted after my clinical observations/rotations.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel as though I am working extremely hard.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel as though I have too many responsibilities as an athletic training student.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I wish I had more time to spend on my extracurricular activity.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I wish I could spend more time with my friends and family.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel overwhelmed by the duties I am expected to perform as an athletic training student.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel fatigued when I think about facing another day.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I treat some people as if I don't care about them.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel I have a positive influence on others.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I worry that I am being hardened emotionally.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel very energetic while working with others.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel overwhelmed by my daily duties.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I have too much homework.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I always feel rushed to get things done.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

I feel inferior to others.

○ Never true

○ Sometimes not true

○ Mostly not true

○ Sometimes True

○ Mostly true

○ Always true

Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you.
On which step of the ladder would you say you personally feel you stand at this time? _____

Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you.
On which step do you think you will stand about five years from now?_____

I know I will graduate from the athletic training program.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

There is an adult in my life who cares about my future.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

I can think of many ways to get good grades.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

I energetically pursue my goals.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

I can find lots of ways around any problem.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

I know I will find a good job after I graduate.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

I have a best friend at school.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

I feel safe in this school.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

My teachers make me feel my schoolwork is important.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

At this school, I have the opportunity to do what I do best every day.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

In the last seven days, I have received recognition or praise for doing good schoolwork.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

My school is committed to building the strengths of each student.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

I have at least one teacher who makes me excited about the future.

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

Were you treated with respect all day yesterday?

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

Did you smile or laugh a lot yesterday?

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

Did you learn or do something interesting yesterday?

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

Did you have enough energy to get things done yesterday?

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

Do you have health problems that keep you from doing any of the things other people your age normally can do?

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

If you are in trouble, do you have family or friends you can count on to help whenever you need them?

○ Strongly Disagree

○ Disagree

○ Neither Agree nor Disagree

○ Agree

○ Strongly Agree

APPENDIX E. TABLE COMPARING THE ATBI TO THE ATSBI

Item	ATBI	Construct	ATSBI	Item
1	I feel emotionally drained from performing the duties of an athletic trainer.	Emotional Exhaustion and depersonalization	I feel emotionally drained from my schoolwork.	6
2	I feel emotionally exhausted when I leave work.	Emotional Exhaustion and depersonalization	I feel emotionally exhausted after my clinical observations/rotations.	26
3	I feel fatigued when I think about facing another day of work.	Emotional Exhaustion and depersonalization	I feel fatigued when I think about facing another day.	32
4	I treat some of my athletes as if I don't care about them.	Emotional Exhaustion and depersonalization	—	
5	Working with athletes all day has become a real strain for me.	Emotional Exhaustion and depersonalization	School and clinical responsibilities all day are a strain for me.	9
6	I feel I have a positive influence on my athletes.	Emotional Exhaustion and depersonalization	I feel I have a positive influence on others.	34
7	I have become more calloused when dealing with athletes.	Emotional Exhaustion and depersonalization	I have become more cynical about whether my contribution counts for anything	17
8	I worry that athletic training is hardening me emotionally.	Emotional Exhaustion and depersonalization	I worry that I am being hardened emotionally.	35
9	I feel very energetic while working with my athletes.	Emotional Exhaustion and depersonalization	I feel very energetic while working with others	36
10	I feel I am at the end of my rope professionally.	Emotional Exhaustion and depersonalization	I feel used up at the end of the school day.	7
11	I don't really care what happens to some of my athletes.	Emotional Exhaustion and depersonalization	I treat people as if I don't care about them.	33
12	Some of my athletes blame me for their injuries.	Emotional Exhaustion and depersonalization	—	
13	I feel I have a positive influence on my coaches.	Emotional Exhaustion and depersonalization	—	
14	I feel I am working too hard with my teams.	Emotional Exhaustion and depersonalization	I feel as though I am working extremely hard.	27
15	I feel that I have too many athletes under my direct care.	Administrative responsibility	I feel as though I have too many responsibilities as an athletic training student.	28
16	I feel overwhelmed by the duties I am required to perform.	Administrative responsibility	I feel overwhelmed on a daily basis.	23

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Item	ATBI	Construct	ATSBI	Item
17	I wish I had more one-on-one time with my athletes.	Administrative responsibility	—	
18	I have too much paperwork.	Administrative responsibility	—	
19	I feel I have too many clinical responsibilities	Administrative responsibility	—	
20	I work too many weekends and holidays.	Time commitment	—	
21	I wish I could spend more time with my family.	Time commitment	I wish I could spend more time with my friends and family.	30
22	I always feel rushed to get things done.	Time commitment	I always feel rushed to get things done.	39
23	I put in too many hours providing athletic training services.	Time commitment	—	
24	I have a positive professional relationship with my coaches.	Organizational support	—	
25	I feel I am paid adequately.	Organizational support	—	
26	The athletic department does not value the athletic training program.	Organizational support	—	
27	I feel my job expectation have not been clearly communicated by the administration.	Organizational support	I feel I am making an effective contribution to the athletic training program.	12
28	I feel inferior when I ask a coworker(s) a question.	Organizational support	I feel inferior to others.	40
29	I am allowed to make decisions about my athlete(s) without asking my supervisor(s).	Organizational support	—	
30	I feel coaches have unrealistic expectations of my job responsibilities.	Organizational support	—	
31	I am afraid of making mistakes while performing my athletic training duties.	Organizational support	—	
32	I am not allowed to utilize all of my knowledge while treating an athlete.	Organizational support	—	
33	I clearly understand the level of responsibility I have regarding the treatment of an athlete.	Organizational support	—	
34	My supervisor(s) communicate changes in our policies and procedures	Organizational support	—	
35	The athletic training department communicates to me any changes in the treatment protocol of athletes.	Organizational support	—	

Item	ATBI	Construct	ATSBI	Item
	—	Emotional Exhaustion & Depersonalization	I feel tired/fatigued when I get up in the morning and have to face another day at school.	8
	—	Emotional Exhaustion & Depersonalization	I can effectively solve problems that arise at school.	10
	—	Emotional Exhaustion & Depersonalization	I feel burnout out from school.	11
	—	Emotional Exhaustion & Depersonalization	I have become less interested in school.	13
	—	Emotional Exhaustion & Depersonalization	I have become less enthusiastic about school.	14
	—	Emotional Exhaustion & Depersonalization	I prefer to do my school work alone.	16
	—	Emotional Exhaustion & Depersonalization	I feel depressed at school.	20
	—	Emotional Exhaustion & Depersonalization	I feel overwhelmed by my daily duties.	37
	—	Time Commitment	I feel there is enough time in the day to accomplish everything for school.	22
	—	Time Commitment	I feel I have good time management skills.	24
	—	Time Commitment	I enjoy working with others.	25
	—	Time Commitment	I wish I had more time to spend on my extracurricular activity.	29
	—	Time Commitment	I have too much homework.	38
	—	Organizational Support	I feel I have a support system at school and home.	21
	—	Self-Efficacy	I doubt my knowledge.	18
	—	Self-Efficacy	I feel confident that I am effective at getting things done.	19

APPENDIX F. MINUTE PAPER

Code: _____

Minute Paper [1]

1. Did you complete the [task] for the week?   Yes   or   No

2. What is your current stress level? 1 being low, 5 being high
       1   2   3   4   5

3. Did the technique assist you with your stress levels over the course of the week?
       Yes   or   No

4. What was most useful on the technique that was utilized this week?

5. How could you incorporate this technique into your daily life?

APPENDIX G. 168 HOUR

This activity allows you to understand how to use your time each week. Everyone has the same amount of time, and knowing how you choose your time will give you the power to change your behaviors.
Step 1. List the amount of time per week for each activity. Use the timesheet you filled out this week, as well as your knowledge of how you spend your time to arrive at a daily average and multiply by 7. Don't forget to account for weekend differences.

    a.   Class time (number of hours in class each week)   _____

    b.   Job/Work   _____

    c.   Studying/Homework   _____

    d.   Commuting/Transportation Time   _____

    e.   Athletics (sports/practice/working out)   _____

    f.   Extracurricular Activities (clubs, church, etc.)   _____

    g.   Other Responsibilities (cleaning, shopping, laundry)   _____

    h.   Sleeping (including naps)   _____

    i.   Eating   _____

    j.   Personal Hygiene (showering, hair, etc.)   _____

    k.   Socializing   _____

Step 2. Add together a-k for a subtotal: _____

Subtract your subtotal from 168 for a total: _____
If the number in your total line is negative, you have committed more time than there is in a week. You are in trouble! If you have time left over, ask yourself what choices there are for your time. Do you have time for more sleep? Volunteering? Friends?

APPENDIX H. SCHEDULE

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
6:00 AM							
7:00 AM							
8:00 AM							
9:00 AM							
10:00 AM							
11:00 AM							
12:00 PM							
1:00 PM							
2:00 PM							
3:00 PM							
4:00 PM							
5:00 PM							
6:00 PM							
7:00 PM							
8:00 PM							
9:00 PM							
10:00 PM							
11:00 PM							
12:00 AM							
1:00 AM							
2:00 AM							

MindTools
Essential skills for an excellent career

Template

Stress Diary

- **For information about stress diaries, visit www.mindtools.com/rs/StressDiary.**

Date and Time	Most Recent Stressful Event Experience	How Happy do you Feel now? (Scale -10-10)	Your Current	How Effectively are you Working now? (0-10)	Fundamental Cause of the	How Stressed do you Feel now?	Physical Symptom Felt During	How Well did you Handle the Event?

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APPENDIX J. SMART GOALS

Goal:

1. Specific: What will the goal accomplish?

2. Measureable: How will you measure whether or not the goal is reached?

3. Achievable: Is it possible? Do you have the knowledge, skills, and resources?

4. Results-Focused: What is the result of the goal? (Not the activities leading up to the results)

5. Time-Bound. What is the established completion date? Does that completion date create a moderate sense of urgency?

Revised Goal:

APPENDIX K. TO DO LIST

Tas	Priority (A-F)
	(A = Very

APPENDIX L. POSITIVE THINKING

Negative Thought	Rational Thought	Positive Thought

APPENDIX M. SWOT ANALYSIS

For instructions on using SWOT Analysis, visit www.mindtools.com/rs/SWOT.

Strengths	Weaknesses
What do you do well? What unique resources can you draw on? What do others see as	What could you improve? Where do you have fewer resources than others? What are others likely to

Opportunities	Threats
What opportunities are open to you? What trends could you take advantage of?	What threats could harm you? What is your competition

APPENDIX N. FINAL MINUTE PAPER

CODE: _____

Thank you for assisting in my doctoral research! I appreciate your willingness to participate. Please complete the following.

1. How many tasks did you complete over the course of the semester:
    a. 1-2
    b. 3-4
    c. 5-6
    d. All
    e. None

2. What is your current stress level? 1 being low, 5 being high

    1   2   3   4   5

3. Please place the techniques/tools in order. Place a 1 by the one that was most beneficial to assisting with your stress all the way up to 8.

    a. 168 hours sheet and schedule   _____
    b. Stress diary   _____
    c. SMART goal   _____
    d. Imagery   _____
    e. Coloring   _____
    f. Music   _____
    g. To do list and positive thinking   _____
    h. SWOT analysis   _____

4. Picking your top technique/tool, how many times over the course of the week would you say you used it?

    a. 1-3
    b. 4-6
    c. 7-9
    d. More than 10 times

5. What other tools did you utilize to assist with your stress reduction?

6. As a future athletic training professional what tool do you feel would assist you the most in stress reduction and burnout?