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Burnout Potential Among Certified Athletic Trainers in Southwest Virginia and Northeast
Tennessee as Measured by a Modified Version of The Maslach Burnout Inventory

A dissertation
presented to
the faculty of the Department of Educational Leadership and Policy Analysis
East Tennessee State University
In partial fulfillment
of the requirements for the degree
Doctor of Education

by
Dennis C. Cobler
August 2009

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Keywords: Burnout, Athletic Trainers, Maslach Burnout Inventory, Gender, Stress

ABSTRACT

Burnout Potential Among Certified Athletic Trainers in Southwest Virginia and Northeast Tennessee as Measured by a Modified Version of The Maslach Burnout Inventory

by

Dennis C. Cobler

The purpose of the study was to examine the burnout potential of certified athletic trainers (ATCs) working in the regions of Southwest Virginia and Northeast Tennessee. To determine burnout potential, the Maslach Burnout Inventory-Human Services Survey was used.

Permission to modify the inventory was obtained from CPP, Inc. Participants for the research study were identified by searching the NATA membership directory, state athletic training websites and state licensure websites. Sixty-seven ATCs were emailed invitations to participate. Fifty surveys were completed. Of these 50, five were eliminated from statistical analysis. Therefore, 45 surveys were satisfactorily completed producing a usable return rate of 67%.

Results of the study indicated that Certified Athletic Trainers in Southwest Virginia and Northeast Tennessee reported burnout potential that is similar to other allied health professions. Both the Emotional Exhaustion and Depersonalization dimensions were in the average range. However, subjects did report high Personal Accomplishment scores that were statistically significantly different from other allied health professions. A significant difference

was also found between males and females in the Emotional Exhaustion dimension. No differences were identified among ATCs who worked in different employment settings.

The top sources of stress for the entire population were working too many hours (33), salary (30), coaches (27), family conflict (22), and lack of physical resources (18). Even when the data were sorted by gender, many of the variables remained the same. The top 5 sources of stress for female ATCs were: coaches (16), working too many hours (11), salary (12), lack of respect (9), and lack of physical resources (9). The top sources of stress for males were too many hours (22), family conflicts (19), salary (18), coaches (11), and lack of resources (9) respectively.

DEDICATION

The dissertation is dedicated to my family who endured this entire process with me every step of the way.

To my wife and best friend – Trudy. You are my true soul mate. My love for you has no limits.

To my children- Bryce and Rily. I consider both of you my greatest blessings- I am honored to be called your dad.

To my parents- Wayne and Wilma. Only now do I see how lucky I was to have both of you as parents. Dad, I wish you could be here- I miss and think of you often.

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CHAPTER 1

INTRODUCTION

Athletic Trainers, like many other allied health professionals, have literally made careers of helping others. Athletic trainers routinely spend countless hours evaluating, treating, and rehabilitating a myriad of injuries that are sustained by their athletes. This level of involvement can be emotionally draining and coupled with working environments that are often highly stressful has the potential to lead to early burnout (Maslach & Jackson, 1996). This emotional involvement is the primary reason the rate of burnout among healthcare professionals has consistently been found to be greater than those employed in nonhealthcare professions (Balogun, Titiloye, Balogun, Oyeyemi, & Katz, 2002; Dorz, Novara, Sica, & Sanavio, 2003; Happell, Martin, & Pinikahana, 2003; Maslach & Jackson, 1996; Peltzer, Mashego, & Mabeba, 2003; Te Brake, Bloemendal, & Hoogstraten, 2003; Visser, Smets, Oort, & Haes, 2003).

Healthcare professionals experience stressors that originate from an array of diverse venues including, but not limited to, long working hours, lack of autonomy, client needs, public misconceptions of their jobs, lack of resources, lack of criteria of measured accomplishments, excessive demands for productivity, and administrative indifference to or interference with their work (Farber, 1983). Many of these same stressors affect one allied health profession in particular, athletic training.

Certified Athletic Trainers (ATCs) are frequently employed in the athletic arena where working in stressful situations is more the norm rather than the exception. There is rarely a shortage of strong egos and Type A personalities in most athletic departments. The

competitive nature of athletics played at any level almost guarantees this. Working in environments where coaches often believe ATCs work *for* them, instead of *with* them, may only intensify this stress. While most ATCs can relate to many of the stressors listed above, there are some stressors that seem to be more closely associated with the athletic training profession itself.

Gieck, Brown, and Shank (1982) found that at least some of this stress is associated with the extensive and intimate relationships the athletic trainer has with the athletes, coaches, administrators, and team physicians. These relationships, and the emotional involvement of meeting everyone else's needs, can prove to be overwhelming. Capel (1986) found that high role conflict, high role ambiguity, an external locus of control, treating a greater number of athletes, and working greater numbers of hours also played a significant role in burnout. Regardless of where the stress comes from, the end result can be the same. And while burnout does not always lead to individuals leaving the profession, it is highly correlated with attrition. Capel (1990) stated that attrition is indeed a growing concern for the athletic training profession.

The certified athletic trainer fills a unique niche in professions that fall under the sports medicine umbrella. Prentice (1991) stated that of all the professionals charged with injury prevention and health care provision for the athlete, perhaps none is more intimately involved than the athletic trainer. Athletic trainers are directly responsible for all phases of health care in an athletic environment, which would include injury prevention, providing first aid and injury management, evaluating injuries, and designing and supervising a timely and effective program

of rehabilitation that can facilitate the safe and expeditious return of the athlete to activity (Prentice, 2006).

Certified athletic trainers are highly trained medical experts who have been recognized by the American Medical Association (AMA) as an allied healthcare profession since 1990. The AMA recommends that certified athletic trainers should be placed in every high school to keep America's youth safe and healthy while remaining physical active (Board of Certification, 2008).

Although ATCs are most often employed by educational institutions at some level, these professionals can be found in a wide variety of venues, both athletic and nonathletic. Some of these venues include colleges and universities, professional sports teams, hospitals, clinics, physician's offices, sports medicine clinics, military, law enforcement, industry, and the performing arts (National Athletic Trainers Association, 2008). Overall, employment opportunities for ATCs are projected to grow faster than the average for all occupations through 2012 (Lockard, 2005). Individuals interested in becoming ATCs should pay special attention to both the health-industry and industrial settings as job opportunities in these fields are anticipated to be the strongest (Lockard). It seems athletic training jobs are, and will continue to be, attractive in the foreseeable future. However, the problem may be keeping these positions filled as burned-out professionals may leave the profession for less stressful and better paying opportunities elsewhere.

The phenomenon of burnout, which is often the consequence of prolonged exposure to stress (Dick & Wagner, 2001), can be defined in several ways. Maslach and Jackson (1996) define burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that often leads to cynicism. An alternate definition of burnout is that

burnout is a reaction to chronic stress that involves negative interactions between environmental and personal characteristics (Perlman & Hartman, 1982). Burnout frequently occurs among individuals who do “people-work” of some kind (Maslach & Jackson, 1981; Maslach & Jackson, 1985) and is theorized to be an imbalance between resources and demands that cause stress. This stress then leads to an emotional response that is characterized by feelings of anxiety, tension, fatigue, sleepless, depression, and exhaustion (Cherniss, 1980a, 1992; Gieck et al., 1982).

Much of the early research regarding burnout has primarily focused on individuals in the helping professions, specifically health, social services, and teaching, where burnout is typically believed to be most frequently and intensely experienced because of the high level of arousal from direct, frequent and rather intense interactions with clients (Cordes & Dougherty, 1993). According to Maslach and Leiter (1997), a key aspect of burnout is increased feelings of emotional exhaustion. As individuals’ emotional resources are depleted, they no longer feel they are able to give of themselves fully. Unfortunately when this happens, working professionals may start to resent their patients, perhaps even blaming them for their own misfortunes (Corcoran, 1986). Professionals who are in this burned-out state may even exhibit certain behaviors that cause their clients to feel that the quality of the care they are receiving is substandard (McCarthy & Frieze, 1999). The professional is then no longer seen as an asset to rehabilitation but an impedance to it. When this occurs, it is quite possible that patients will look elsewhere for treatment if not drop the treatments altogether. This is detrimental to all parties involved as the professional has lost patients and the patients have abandoned treatments that may have otherwise helped their particular conditions.

Although there is more than one single instrument available that attempts to measure burnout, the Maslach Burnout Inventory (MBI) is recognized as the definitive measure of burnout (Capel, 1986; Maslach & Jackson, 1996; Maslach & Leiter, 1997). (Discussions regarding other survey instruments are presented in Chapter 2.) The MBI has been used in numerous studies around the world and by a wide variety of professions. The original version of the MBI was intended for those individuals who were primarily employed in human services. This version is now called the MBI-HSS or MBI-Human Service Survey. Two later versions, the MBI-ES or MBI-Educators Survey and the MBI-GS or MBI-General Survey, were created to address populations or professions who did not fit the human service classification. All three versions of the MBI share similar characteristics, with the later two variations having only slightly different terminology and dimensions. Regardless of what version of the MBI is used, three separate scores are generated. For the MBI-HSS and MBI-ES, scores are generated for the dimensions of (1) Emotional Exhaustion, which assesses feelings of being overextended and exhausted by one's job (2) Depersonalization, which measures impersonal responses towards one's patients, and (3) Personal Accomplishment, which assesses feelings of competence and successful achievement in one's job (Maslach & Jackson, 1996). For the MBI-GS, the three dimensions are slightly different, although still quite similar: (1) Exhaustion, (2) Cynicism, and (3) Professional Efficacy. The questionnaire itself contains 22 items that are scored on a 7-pt likert scale ranging from 0 (never) to 6 (Every day). Scores are tabulated and grouped which then generates numeric values for the dimensions described above. The questionnaire takes about 10-15 minutes to complete and is self-administered.

Maslach and Jackson (1996) indicate burnout can be viewed in the following ways:

1. High Burnout – illustrated by high scores on the Emotional Exhaustion and Depersonalization dimensions and low scores in the Personal Accomplishment dimension.
2. Average Burnout- illustrated by average scores in all three dimensions.
3. Low Burnout- illustrated by low scores on the Emotional Exhaustion and Depersonalization dimensions and high scores in the Personal Accomplishment dimension.

Previous research that has investigated the relationship between burnout and athletic training has used the Human Service version of the MBI as the primary survey instrument (Baker, 2004; Hendrix, Edmond, & Herbert, 2000; Kauk, 1990). This would seem to be the logical choice for athletic training, as the profession is recognized as an allied health profession. However, the argument could be made that the MBI-ES or the Educator’s Survey could (or should) be used under the right set of circumstances. The popularity of athletic training has caused many institutions that have accredited undergraduate or graduate programs to have completely separate athletic training staffs, one staff that primarily satisfies the needs of the athletic department (providing sport coverage, medical referrals, etc.) and one staff that is devoted primarily to the educational component of the academic program. It is quite possible, if not expected, that these two groups would exhibit different levels of burnout due to the variation in their day to day interactions. However, having separate athletic training staffs is not the norm, especially in the areas of Southwest Virginia and Northeast Tennessee. At the time this study was being prepared, no institution at any level had this luxury. With this in

mind, the MBI-HSS would be the most appropriate instrument to use when conducting research that involves certified athletic trainers in this particular geographical region.

Background of the Study

Athletic trainers may be particularly prone to burnout due to the very nature of their jobs. Working long hours in highly stressful environments can take its toll on the most dedicated and enthusiastic individual. Gieck et al. (1982) perhaps state this best when describing how athletic trainers often begin their careers with a high level of interest, but then as the demands of the job start to accumulate feelings of pressure, frustration and exhaustion develop. The “fire” with which the athletic trainer began their careers is effectively extinguished. Factors that attracted the athletic trainer to the profession to begin with, such as the chance to work with people and feeling a sense of achievement, may no longer ring true the longer the individual stays in the field (Jervas, 2004). This not only can lead to attrition in the profession, but it may mean the profession is losing those individuals who have the most experience, and experience is a trait that is not easily replaced.

Athletic trainers are vital members of the sports medicine team. Their expertise is counted on daily to maintain the health and well-being of all those who participate in athletics at some level. Athletic trainers serve as an institution’s link to the larger community of allied health professionals and this important connection cannot be understated.

Purposes of the Study

The purposes of the study were:

1. To determine the burnout potential for certified athletic trainers employed in the region of Southwest Virginia and Northeast Tennessee as measured by a modified version of the MBI-HSS.
1. To identify what personal and professional variables were most correlated with each dimension of the MBI-HSS in this population.
2. To determine what effect gender played in the process of burnout.
3. To identify the most common source of stress for ATCs in the research population.

Research Questions

1. Are there significant differences in mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) among athletic trainers in Southwest Virginia and Northeast Tennessee when compared with the established mean scores of other allied health professionals?
2. Are there significant differences between the mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) between those employed in the clinical-high school setting than those working in the college-university setting?

3. How accurately can scores of each dimension of the MBI-HSS (Personal Accomplishment, Emotional Exhaustion, and Depersonalization) be predicted using a linear combination of the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, teaching responsibilities, employment position, and number of teams covered?
4. Are there any significant differences in the mean scores in each of the three MBI-HSS dimensions (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) between male and female ATCs?
5. What are the greatest sources of stress for ATCs in this population?

Significance of the Study

Limited research has been conducted on burnout and its effects on the athletic training profession. Those studies that have been conducted have primarily focused on athletic trainers who live and work on the west coast of the United States. Although some research does exist that targets certain areas in the eastern United States, none could be found that specifically focuses on the regions of Southwest Virginia or Northeast Tennessee. The proposed study would produce burnout data that are unique to this demographic. These data could then be compared and contrasted with similar research completed in other regions of the country. These comparisons could reveal previously unknown professional trends related to burnout that would be important to anyone who employs or works as an athletic trainer.

The study may also ultimately impact attrition rates in the athletic training profession by first determining the level of burnout in the region, while simultaneously identifying those variables that are correlated with a higher risk of the phenomenon. If variables can be correctly identified, then perhaps these variables can be addressed before individuals leave the profession. Burnout is a gradual process and takes time to develop; if leaders of an organization understand what factors tend to cause burnout, they can take preemptive steps to deal with it.

There may also be a financial benefit to this study, specifically for those who employ athletic trainers. A recent article in the NATA NEWS (2007, January) found that the ROI, or Return on Investment, was positive for every organization that participated in this study. In the simplest terms, ROI are formulas used to measure whether a project (or position) is profitable. Profitability can be defined not only in monetary terms but in perceived benefit as well. In this article, an overwhelming percentage (83%) reported a return rate of a least \$3 for every \$1 spent on athletic training services. Some companies reported an even higher return rate of \$7 for every \$1 spent. In today's society few things have more impact, or speak with a louder voice, than the mighty dollar.

Another benefit of this study can also be illustrated from the article described above. Athletic trainers were shown to decrease workplace injuries, and injuries often lead to missed workdays, which in turn could translate into decreased production. Although the initial study focused on athletic trainers who were employed in industrial or occupational sites, it is quite easy to transfer this model to the athletic arena. If athletic trainers are there to prevent injuries (which they are), players are less likely to miss practice or games, making the team more

productive. However, not only do athletic trainers prevent injuries, when the inevitable injuries do occur, they then provide medical and rehabilitative care that is second to none.

Individuals who are employed in the regions of Southwest Virginia and Northeast Tennessee are subject to demographic and economic variables that are both challenging and unique to this area. While these predominately rural regions may “move at a slower pace” than larger metropolitan areas, the stress levels encountered by ATCs may actually be more pronounced due to factors such as smaller staff sizes and lack of resources, both physical and financial. Medical facilities, as well as individuals who specialize in particular fields, are not as prevalent as they are in larger metropolitan areas. East Tennessee State University, Radford University, and Virginia Polytechnic and State Institute (Virginia Tech) are the only three NCAA Division I Universities located in Southwest Virginia and Northeast Tennessee. All other colleges or universities are smaller NCAA Division II, III, or NAIA programs. This is pertinent because smaller institutions may expect athletic training staffs to take on increasing workloads without the necessary financial support (Hendrix et al., 2000). It is quite common for the certified athletic trainer to wear many hats in such settings. With more and more responsibilities, ATCs may feel overwhelmed, opening the door to professional burnout.

Limitations and Delimitations

The study was delimited to selected licensed ATCs living in the regions of Southwest Virginia and Northeast Tennessee. Licensing procedures for each state are discussed in Chapter 2. Subjects had to be 18 years of age or older and active members of the profession (not retired status or students). Athletic training must also have served as their primary means of

income. It's quite common for professionals working in similar fields to also have the ATC credential. Physical therapy is perhaps the best example of this dual certification. In this case, it is physical therapy that primarily "pays the bills", so these subjects were not appropriate for the study.

Furthermore, because subjects were selected for the primary reason that they are employed in the areas of Southwest Virginia and Northeast Tennessee, there may be difficulties generalizing study results to ATCs employed in other regions.

At least some of the limitations of the study were related to the survey instrument itself. The ability of participants to read and then understand the directions of the survey is important. Unfortunately, the language of the MBI-HSS has been criticized for being ambiguous by some, even triggering hostile responses from its wording (Kristensen, Borritz, Villadsen, & Christensen, 2005). Kristensen et al. also propose that the MBI-HSS may not even accurately measure burnout with its three dimension design, which would also be a limitation of the study, and a significant one at that. However, this belief is not widely held, as the validity of the MBI-HSS has been repeatedly substantiated. The validity and reliability of the MBI-HSS are discussed in more detail in Chapter 2.

Personal bias of the respondents was also a limitation. Maslach and Jackson (1996) recommended that in order to minimize personal beliefs or expectations regarding burnout, the subjects should be unaware the MBI-HSS is a burnout measure. Instead of using the terms "burnout" or "burnout inventory" the terms "Human Service Survey" should be used. Honesty of the subjects when answering the survey may have also been a limitation.

Finally, the return rate of the survey was also a limitation. Return rates of on-line surveys can fluctuate widely but can be improved significantly by making follow-up contacts (Berg & Latin, 2008; McMillian & Schumacher, 2006). Dillman (2000) stated that an acceptable response rate for an online survey is 60%, but a response rate of 80% should be the goal.

Definitions of Terms

The following terms are used during the study:

Allied Health Profession- a group of medically prescribed health-care services, such as occupational therapy and athletic training, that are provided by licensed professionals.

Approved Clinical Instructor- Athletic trainers who are certified by the BOC, have a minimum of 1 year experience, and provide supervision and instruction in the clinical setting (NATA Education Council, 2008).

AMA- American Medical Association

ATC- credential verifying the Board of Certification (BOC) examination has been successfully passed and the applicant is now recognized a certified athletic trainer

Attrition- losing personnel within a particular profession

Board of Certification (BOC) - recognized as the only accredited certification program for athletic trainers, who are allied health care professionals (BOC website, 2008)

Burnout-a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that often leads to cynicism (Maslach & Jackson, 1996)

CAATE- Commission on Accreditation of Athletic Training Education

Certified Athletic Trainer- athletic trainer holding the credential of ATC having successfully passed the BOC certification examination

Clinical Instructors- BOC certified athletic trainers or other qualified healthcare professionals with a minimum of 1 year of work experience in their respective academic or clinical areas (NATA Education Council, 2008)

Clinical Proficiencies- a common set of skills the entry-level athletic trainer should have mastered after graduating from an accredited institution

Educational Competencies- the educational content required of entry-level athletic training programs

Education Council- organization within the NATA that deals with matters related to athletic training education

MBI- Maslach Burnout Inventory

MBI-HSS- Maslach Burnout Inventory-Human Services Survey

MBI-GS- Maslach Burnout Inventory-General Survey

MBI-ES- Maslach Burnout Inventory-Educator's Survey

NAIA- National Association of Intercollegiate Athletics

NATA- National Athletic Trainers Association

NCAA- National Collegiate Athletic Association

State Licensure (Practice Act) - process by which athletic trainers seek permission to practice within a certain state

ROI- Return on Investment

TATS- Tennessee Athletic Trainers Society

VATA- Virginia Athletic Trainers Association

Summary

Chapter 1 has introduced the reader to the phenomena known as burnout, and more specifically, burnout in the field of athletic training. The allied health professions have long been identified as fostering environments that are prone to employee burnout. Certified athletic trainers work in such environments on a daily basis. These individuals often have to make quick decisions that affect the not only the health of their athletes but sometimes even their careers (Lockard, 2005).

Chapter 1 has also discussed the Maslach Burnout Inventory (MBI). The MBI is recognized as the single leading measure of burnout (Capel, 1986; Maslach & Jackson, 1996; Maslach & Leiter, 1997). Three versions of the MBI currently exist with each intended to be

used with specific populations. The version that has been most widely used for research involving healthcare professions is the MBI-HSS (Human Service Survey). This holds true for research involving the allied health profession of athletic training.

The following chapters address:

Chapter 2 further examines the literature related to the topic of burnout as well as various instruments that are used to measure this process. Special attention will be given to the Maslach Burnout Inventory. Research relating to burnout and athletic training, as well as other professions, is examined. The roles and responsibilities of the certified athletic trainer are discussed.

Chapter 3 discusses methodology used in the research study. Discussion topics include participant selection, research design, procedures, and data analysis models.

Chapter 4 examines the results of the research study.

Chapter 5 includes discussion, conclusions, and recommendations.

CHAPTER 2

LITERATURE REVIEW

The literature review examined several areas as they were related to the concept of burnout. The phenomenon of burnout was first approached from a historical perspective, discussing those individuals who first studied burnout and subsequently offered the earliest glimpses into this complicated process. Stress and its correlation with burnout was then discussed. The literature review proceeded to examine current views of burnout and its observed effects on various professions. Furthermore, instruments that have been used to measure burnout were discussed, with special attention being given to the Maslach Burnout Inventory, the instrument that was be used for this study. Finally, the field of athletic training was discussed with particular attention given to research that has focused on this particular allied health profession.

Burnout

The concept of professional burnout was first examined by Herbert Freudenberger in 1974. While Freudenberger did not offer a definition for the phenomenon of burnout at that time, he was the first to look at burnout in terms of the physical and behavioral effects it had on individuals. In the early 1970s, the term “burnout “ was primarily associated with individuals who were substance abusers and no longer cared about anything but their drug of choice (Lambie, 2006). Freudenberger had noticed that his own job as a psychoanalyst, which he once found so rewarding, had started to leave him feeling only fatigued and frustrated.

Freudenberger, in many ways, refocused the term burnout to address a process he noticed was occurring, not only personally, but in several other professions as well.

Freudenberger (1974) stated that one of the primary reasons for employees “burning out” actually stemmed from the leaders of an organization. Freudenberger stated as leaders lost their charisma; the employees viewed them as human, as opposed to the super humans they imagined them to be when they first started in their positions. With this let-down, employees felt disappointed. This disappointment eventually finds its way into their work.

Freudenberger stated that burn-out often manifested itself in different symptomatic ways from person to person, ranging from physical symptoms such as frequent headaches and exhaustion to fatigue and gastrointestinal problems. Other researchers have noted physical symptoms such as backaches, increased use of alcohol and drugs, anger, irritability, hyperventilation, dry throat, nervous tics, heart palpitations, heavy perspiration, sexual problems, missed or irregular menstrual cycles, as well as depersonalization and emotional exhaustion (Farber, 1983; Kahill, 1988; Maslach & Jackson, 1981; Pines & Aronson, 1988; Schaufeli, Maslach, & Merck, 1993; Schaufeli & Enzmann, 1998).

Burnout has also been linked with a wide variety of mental health problems. Mental health problems can range from decreased self-esteem, social isolation and withdrawal, disillusionment, tension and depression, to guilt and anxiety (Chreniss, 1980a; Cordes & Dougherty, 1993; Jackson & Maslach, 1982; Kahill, 1988). Schaufeli and Enzmann (1998) do an exceptional job of describing the symptoms associated with burnout by dividing them into five distinct groups or clusters. These clusters were identified as (1) Affective Symptoms, (2) Cognitive Symptoms, (3) Physical Symptoms, (4) Behavioral Symptoms, and (5) Motivational

Symptoms. As any of these problems mounts, individuals can feel trapped in their current positions, which may only intensify these problems. Furthermore, Maslach and Leiter (1997) describe how negative feelings toward family and personal relationships may develop as these individuals continue on this path. They may even develop a “why try attitude” because they see no positive resolution available for their particular situation. Professionals who are in this burned-out state may exhibit certain behaviors that actually cause their patients to feel that the quality of the care they are receiving is substandard (Freeborn, 1998; Maslach, 2003; McCarthy & Frieze, 1999), which according to some research may indeed be the case (Maslach, 1976, 1978a, 1978b, 1979; Maslach & Jackson, 1979; Maslach & Jackson, 1996). While the physical and emotional signs associated with burnout are somewhat consistent across research, the definition of this term in literature is not (Dale & Weinberg, 1990).

Maslach and Jackson (1996) 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”. Similarly, Halbesleben and Buckley (2004) define burnout as a psychological response to work stress that is characterized by emotional exhaustion, depersonalization, and reduced feelings of personal accomplishment. Pines and Aronson (1988) define burnout as a subjective experience of physical, emotional, and mental exhaustion caused by long-term involvement in situations that are emotionally demanding. This particular definition may provide some insight as to why healthcare professionals are frequently cited in literature as having some of the highest rates of burnout. Perlman and Hartman (1982) offer still another definition of burnout, calling it a reaction to chronic stress that involves negative interactions between environmental and personal characteristics.

Cherniss (1980b) wrote that burnout is primarily a reaction to a stressful work situation.

Cherniss called this process a “disease of overcommitment”. He defined burnout as “a process in which a previously committed professional disengages from his or her work in response to stress and strain experienced in the job”. Cherniss stated that when individuals reached this state they basically are living to work and everything else in their life takes a back seat to the job. Freudenberger (1974) supported this belief and added that when professionals are burned out, they suddenly seem to be just going through the motions. Still another view of burnout comes from Farber (1991). Farber stated that burnout is a work-related syndrome that stemmed from an individual’s belief that a significant discrepancy exists between effort (input) and reward (output). Regardless of how burnout is defined or manifests itself, the detrimental effects associated with this phenomenon can have lasting effects for both individuals and organizations alike.

Burnout as a Process

Burnout has generally been described as a process rather than a series of isolated events or symptoms (Farber, 1983; Rosenberg & Pace, 2006). Freudenberger and his colleague Gail North divided this process into distinct 12 phases: (1) A compulsion to prove oneself, (2) Working harder, (3) Neglecting their needs, (4) Displacement of conflicts, (5) Revision of values, (6) Denial of emerging problems, (7) Withdraw, (8) Obvious behavioral changes, (9) Depersonalization, (10) Inner emptiness, (11) Depression, and (12) Burnout syndrome (The Burnout Cycle, 2006). Kestnbaum (1984) stated that burnout can be viewed as a process typified first by acute, momentary “attacks”, then phases of symptoms accompanied by

unresolved conflicts, efforts to recoup, and then personal struggle. Schaufeli and Dierendonck (1993) described burnout as being a gradual and complex process that had no noticeable onset but rather consisted of gradual changes that occurred slowly overtime. Cherniss (1980b) stated that burnout is a transactional process comprised primarily of three stages. (1) Imbalance between resources and demand, (2) Immediate, short term emotional response to this imbalance characterized by feelings of anxiety, tension, fatigue, and exhaustion, and (3) Change in attitude and behavior. Cherniss continues to state that burnout is not a simple, unidimensional problem with easily identified causes and solutions, but rather a complex issue with roots in intrapsychic, interpersonal, occupational, historical and social phenomena.

Veninga and Spradley (1981) proposed a slightly different view of the progression of burnout. They stated burnout is a five step process with these stages being:

1. Stage One - Job Contentment. During this stage, the employee has just started his or her job and is excited and willing to do whatever necessary to succeed in the new position.
2. Stage Two- Job Disappointment. The initial excitement felt by the new employee starts to wear off. It is here the realization of the job comes into focus.
3. Stage Three- Job Disillusionment. The employee now starts to resent work and tries to separate from the clients or patients.
4. Stage Four- Job Despair. The employee may now feel trapped in the once exciting job. There seems to be no "light at the end of the tunnel", which only deepens the stage.
5. Stage Five- Work Redefined. The employee will leave the job and possibly the profession altogether.

Fiegley (1984) also described burnout as a multistage process, more specifically a three-stage process. The early stage of burnout manifesting itself in increased feelings of fatigue, irritability, headaches, upset stomach, feelings of incompetence, loss of enthusiasm, and an unvoiced frustration about life in general. The intermediate stage is represented by the individual becoming more withdrawn and silent. And finally the third stage, recognized by a sense of not being good enough, cynicism and alienation.

Perhaps the most accepted view of burnout comes from Maslach and Jackson (1981). As previously stated, Maslach and Jackson define burnout as a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do “people-work” of some kind. The authors describe burnout occurring in three aspects: (1) Individuals begin to exhibit increased feelings of emotional exhaustion. As emotional resources are depleted, individuals feel they are no longer able to give of themselves at a high level. (2) Individuals start to develop negative and cynical attitudes about their patients or cliental, perhaps even blaming them for their own problems (3) Individuals develop a tendency to evaluate themselves negatively, particularly with regard to the work with clients. Individuals at this stage often feel unhappy about themselves and dissatisfied with their job accomplishments (Maslach & Jackson, 1996).

It is Maslach and Jackson who developed the Maslach Burnout Inventory (MBI), which is widely regarded as the leading instrument for measuring burnout. The MBI is discussed at length later in the literature review.

Risk Factors for Experiencing Burnout

As previously mentioned, burnout does seem to affect certain professions or individuals more than others. It is the allied health professions and helping professions that seem to develop burnout more than any other occupation (Maslach & Jackson, 1981; Maslach & Jackson, 1996). Many professions within this classification do seem to share several characteristics. The health care industry as a whole primarily exists to serve and care for others. Medical professionals (and others professions such as education) often invest, not only large amounts of time in helping others but large amounts of emotional resources as well. Care givers, by nature, give of themselves and want to see their patients get well. When this doesn't happen, it can be demoralizing. One can see the same thing happening with educators or even law enforcement personnel. Educators routinely give of themselves above and beyond of what is normally expected in hopes of seeing their students succeed. When the students then do not achieve the goals set by the instructor, the educator may feel responsible and subsequently find it difficult to stay motivated (Maslach & Jackson, 1996). Similarly, law enforcement officers are primarily employed to "serve and protect" the general public. It is easy to see how officers in law enforcement can get discouraged and eventually burned out with a job that is not only extremely dangerous but at times may seem to have little effect on the overall crime rates in a particular region.

Piedmont (1993) found that personality plays an important role in the process of burnout. Individuals who are anxious, depressed, or unable to deal with stressors were found to be the same individuals who experienced the highest levels of emotional exhaustion and depersonalization, both at work and in their lives away from work. Kokkinos (2007) also found

that certain personality characteristics play a role in predicting burnout. Neuroticism was specifically found to be a common predictor for all dimensions of burnout. Buhler and Land (2004) also found neuroticism along with extraversion, an external locus of control, job-distance inability, and frustration to be significantly related to certain aspects of burnout. McCraine and Brandsma (1988) identified feelings of inadequacy, low self-esteem, dysphoria and obsessive worry, passivity, social anxiety, and withdrawal from others as potential predictors of burnout.

Pines and Aronson (1988) stated that burnout tends to affect people who are entering professions as highly motivated and idealistic, expecting their work to give their lives a sense of meaning. These individuals can be the best employees, who exhibit the most enthusiasm, readily accept responsibility, and whose job is an important part of their identity. In an article that discussed burnout among athletic trainers, Gieck et al. (1982) stated that, "The trainer begins his professional career with a high level of interest and enthusiasm. He is bursting with ideas and desires to implement them. The classic work pattern of dedication and commitment becomes over-dedication and over-commitment" (pg38). Similarly, Faber (1983) found that a high level of commitment to one's work is often regarded as a precursor to burnout. Simply stated, if an individual is not interested in the job to begin with, losing or leaving that job is of no big consequence. Pines and Aronson (1983) support this assumption and proposed that those who have low job expectations and genuinely do not care about their work do not usually experience burnout.

Harris, Cumming and Campbell (2006) found that the majority of those experiencing burnout were generally young, low-income individuals who had just begun their careers.

Christensen (1997) found that younger athletic trainers experience higher degrees of emotional exhaustion than older athletic trainers, which is significant because many feel that emotional exhaustion is at the core of being burned out. This finding was supported by Cox, Tisserand, and Taris (2005).

Similarly, many researchers have found that teachers, in particular, who are young, single, and work in a suburban or urban secondary school tended to experience increased levels of burnout (Crane & Iwanicki, 1986; DeRobbio & Iwanicki, 1996; Gold, 1985; Pierson-Hubeny & Archambault, 1984; Schwab & Iwanicki, 1982b). Having not yet developed adequate coping strategies, the inexperienced employee may simply feel overwhelmed and unable to cope with the daily stressors of a particular job.

Yet another risk factor that may lead to burnout is that of having little control over work related decisions (Glass, McKnight, & Valdimarsdottir, 1993; Tetrick & LaRocco, J., 1987). This risk factor has a tendency to involve the novice or new employee. Other factors that have been associated with burnout include low job status, lack of recognition for one's job, lack of perks, and low salaries (Wessells, Kutscher, Seeland, Cherico, & Clark, 1989).

Stress and Its Relation to Burnout

It's noteworthy to mention that while the terms stress and burnout are often used interchangeably, these terms are not exactly the same (Cordes & Dougherty, 1993; Farber, 1991). However, it is extremely difficult, although not impossible, to find literature and research that primarily focuses on burnout where the term "stress" is not used somewhere within the text. And while stress does not necessarily cause burnout, it can lead to it when

stress continuously outweighs the supports or rewards of a job (Dale & Weinberg, 1990; Pines & Aronson, 1988). Acknowledging the differences between the two terms, various studies have demonstrated that there does indeed seem to be a high correlation between stress and burnout (Blase, 1982, 1986; Dick & Wagner, 2001; Farber, 1983; Fiminan & Blanton, 1987; Friesen & Sarros, 1989; Kennedy, 2005). Some have even argued that burnout is actually a type of stress, more specifically a chronic affective response to stressful working conditions that present high levels of interpersonal contact (Ganster & Schaubroeck, 1991). Rankin and Ingersoll (2001) state that stressors can present themselves in a variety of different ways, with these stressors being physical, social, or psychological in nature.

Like burnout, the term “stress” can be defined in several ways. Schuler (1980) defined stress as a dynamic condition in which an individual is confronted with an opportunity to perform an action for which the resolution is perceived to be uncertain but important. Taber’s cyclopedic medical dictionary (2005) defines stress as any physical, physiological, or psychological force that disturbs equilibrium. Similarly, Baechle and Earle (2000) define stress as a psychological and physiological response to an event, or events, that upset an individual’s equilibrium or homeostasis in some way. When faced with a threat to our physical safety or emotional equilibrium, the body's defenses rapidly enter a state known as the “fight-or-flight” response. The fight-or-flight response involves a series of biological changes that prepare an individual for immediate action. The sympathetic nervous system responds by releasing a flood of stress hormones including adrenaline, norepinephrine, and cortisol (Baechle & Earle, 2000). While these hormones are extremely beneficial in terms of the flight-or-flight response, this may not be the case if their effects are felt long term. Some hormones may remain in the blood

stream for days, or even weeks, and may actually become a problem for the body because of their sustained actions (Prentice, 1999). Long-term or chronic stress can lead to a host of physical ailments including hypertension, heart problems, and a weakened immune system (Chandola et al., 2008; Dick & Wagner, 2001). Kivimaki et al. (2007) found that individuals reporting high rates of job stress had a twofold higher risk of death from cardiovascular disease than their lower scoring colleagues. Couple this finding with results from a recent survey that ranked the top 10 most stressful professions and the allied health professional may have an even more increased cause for concern. The survey, conducted by SkillSoft, found that the medical and caring professions ranked a solid number two trailing only the IT industry (Top 10, 2007).

It's understandable that many would view stress as something to be avoided; however, stress does not necessarily always have to involve negative processes. Stress in moderation is normal and can even be quite beneficial under the right set of conditions (Carlson, Anson, & Thomas, 2003). Some individuals even seem to thrive in stressful working situations, perhaps even choosing their careers to match this tendency. Exercise itself is a form of stress, but as opposed to negative stress or distress, this good stress or eustress is extremely beneficial. Exercise causes the body to adapt to the demands or loads that are being placed on it, which usually lead to any number of positive physical adaptations. Some of these adaptations are increased metabolism, increased lean muscle mass, decreased body fat, decreased heart rate and blood pressure, decreased levels of LDL cholesterol (bad cholesterol) and increased levels of HDL cholesterol (good cholesterol) (Baechle & Earle, 2000).

Gender Differences and Burnout

Much research has been completed on the topic of burnout and its effects on a wide range of professions. However, a vast majority of this research does not examine what effect(s) gender may play in this process. Maslach and Jackson (1985) found that females in general tend to focus more on caring and nurturing their patients as opposed to their male counterparts and may actually be better at “people-work”. This finding seems to suggest that because females give more of themselves emotionally, they could be more prone to burnout. Similarly, Peltzer et al. (2003) did find that female physicians experienced higher levels of emotional exhaustion when compared to their male counterparts. Other research has also supported the assumption that females do indeed develop stronger emotional ties with their patients than do males (Gold 1985; Schwab & Iwanicki, 1982b). Te Brake et al. (2003) found that male dentists reported higher scores on the depersonalization dimension of the MBI than did the female dentists. This seems to indicate that males tended to avoid establishing emotional ties with their patients, which coincidentally has been found to occur in other studies as well (Carlson et al., 2003; Doublet, Lemaire, Damourette, Derousseaux, & Blond, 2002).

Stenlund et al. (2007) suggested that total pay and domestic workload could be important causes of burnout specifically for women. Women often have a “second job” when they return home, especially if they have a family. And while it is not always the case, it is usually the female that tends to do a majority of the household chores such as cooking and laundry. Balogun et al. (2002) found some professional women had actually used child bearing and child rearing as an excuse for leaving a job they no longer enjoyed. One respondent in the

study stated that she had “escaped into motherhood” when the opportunity presented itself because she was so burned out in her current position.

In other studies, the role gender may play in burnout is inconclusive, with many finding significant differences between the two genders, and others finding none. For example, Linzer et al. (2002) did find that women physicians had higher stress and burnout levels than did male physicians, while Carlson et al. (2003) found there to be no differences in overall burnout rates between the two genders. Similarly, Benett, Michie, & Kippax (1991) and Ross & Seeger (1988) found no significant differences in burnout rates between males and females.

In athletic research, Caccese and Mayerberg (1984) found that female coaches reported significantly higher ratings on both the Emotional Exhaustion and Personal Accomplishment subscales than do male coaches. However, the researchers found no differences in the depersonalization subscale. In this study, females were also found to be more frustrated by their job and to feel that they were not accomplishing anything worthwhile. However, results of the study also indicated that overall, neither gender was excessively burned out when compared to other professions. Similarly, Vealey, Udry, Zimmerman, and Soliday (1992) found that female coaches had higher levels of emotional exhaustion than did male coaches. However, this study found both genders had high to moderate levels of burnout. Felder and Wishnietsky (1990) also found higher rates of burnout in female coaches than in male coaches.

Pastore and Judd (1993) also found significant differences in the Emotional Exhaustion subscale when females coaches were compared to their male counterparts. The authors speculate that burnout has played, and continues to play, a significant role in the continuing decline of the number of female coaches. Furthermore, the authors speculate that burnout

may vary by level of institution, which is one area that was examined in this research. Some speculate that females are more prone to burnout because of all of the extra family responsibilities, household chores that add to role conflict (Pastore & Judd, 1993).

McMurray et al. (2000) found that female physicians reported significantly less work control than men. Women were also found to experience burnout 1.6 more times than men. There were no gender differences in stress scores, but women did report to have a 60% higher risk of burning out.

Measuring Burnout

Although several instruments exist that attempt to measure burnout in some capacity, it is the Maslach Burnout Inventory (MBI) that has come to dominate research dealing with this issue, with an estimated 91% of all studies using this instrument (Cox et al., 2005; Gorter, Albrecht, Hoogstraten, & Eijkman, 1999; Maslach & Jackson, 1996; Richardsen & Martinussen, 2004; Schaufeli & Enzmann, 1998). Since being developed in 1981, the MBI has been recognized as the definitive measure of burnout. It has been used by organizations and researchers alike to assess how employees experience their work (Maslach & Jackson, 1996; Maslach & Leiter, 1997). Although the MBI has been used in a wide range of professions, many are classified as allied health or helping professions with some of these being nursing, education, law enforcement, dentistry, and the focus of the proposed study, athletic training.

Maslach Burnout Inventory (MBI)

Three versions of the MBI exist: the MBI-Human Services Survey (MBI-HSS), the MBI-General Survey (MBI-GS), and the MBI-Educators Survey (MBI-ES). The original version, MBI-HSS (and the one to be used in this particular study), was designed to assess three aspects of burnout: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Each dimension provides a separate score that cannot be combined with the other scores. The Emotional Exhaustion dimension assesses feelings of being emotionally overextended and exhausted. The Depersonalization dimension measures an unfeeling and impersonal reaction towards others who are primarily the clients being treated by the individual. The Depersonalization dimension measures feelings of competence and successful achievement in one's profession (Maslach & Jackson, 1996). The other two versions of the MBI (MBI-GS and MBI-ES) were developed later to address professions that did not fit in the human services category. The MBI-GS is an adapted form of the MBI-HSS and targets those professions that have limited or only causal contact with others. The MBI-GS has three dimensions that are slightly different from the original MBI-HSS. These dimensions are Exhaustion, Cynicism, and Professional Efficacy. The MBI-ES was developed to identify burnout levels of those who work exclusively in an educational setting. The MBI-ES uses the same three dimensions as does the MBI-HSS. In actuality, the MBI-ES is basically the same as the MBI-HSS, with the only real difference being the terminology used in certain items. For example, the term "recipient" is changed to "student" in the MBI-ES. Maslach and Jackson stated that perhaps the most valuable use of the MBI-ES is at the school district level to detect potential burnout problems. Many researchers have questioned whether or not it is necessary to use all three dimensions of

the MBI-HSS, with some choosing to drop the Personal Accomplishment dimension while retaining the Emotional Exhaustion and Depersonalization dimensions, with most agreeing that the Emotional Exhaustion dimension is the core component of burnout (Cox et al., 2005). For this study, the MBI-HSS was used. This version was used primarily because athletic training falls under the category of the human service professions. Furthermore, at the time of the study, the MBI-HSS had been the overwhelming choice for examining burnout in the athletic training profession. Many of these studies are discussed later in the literature review.

Reliability and Validity of the MBI-HSS. Maslach and Jackson (1996) found the reliability coefficients for the MBI-HSS subscales were as follows: .90 for Emotional Exhaustion (EE), .79 for Depersonalization (DE), and .71 for Personal Accomplishment (PA). Maslach and Jackson also provided data on the test-retest reliability of the MBI-HSS used in various professions. Administrators tested at 2- and 4-week intervals and found the following test-retest coefficients: .82 EE, .60 DE, and .80 PA, while teachers retested at a 1 year interval produced slightly lower percentages: .60 EE, .54 DE, and .57 for PA. Leiter and Durup (1996) found test-retest correlations of .75 EE, .64 DE, and .62 PA at a 3-month interval. Leiter (1990) found test-retest correlations of .59 EE, .50 DE, and .63 PA at a 6-month interval. Lee and Ashworth (1993) found test-retest correlations of .74 EE, .72 DE, and .65 PA at an 8-month interval. Richardsen and Martinussen (2004) reported slightly lower dimension scores but still found the 3-factor structure of the MBI appropriate for use with the human service professions. Schaufeli, Bakker, Hoogduin, Schaap, and Klader (2001) also found the 3-factor structure of the MBI to be confirmed. Furthermore, the authors found that the dimensions of Emotional Exhaustion and

Depersonalization were successfully able to discriminate between burned out and nonburned out employees. Research conducted by Hastings, Horne, and Mitchell (2004) also supported the use of the MBI-HSS and found the instrument to be both valid and reliable, producing scores of .87 EE, .68 DE, and .76 PA. Numerous other researchers have also demonstrated the MBI-HSS is both reliable and valid and appropriate for use in a wide range of professions (Abu-Hilah & Salameh, 1992; Green & Walkey, 1988; Naude & Rothmann, 2004; Richardsen & Martinussen, 2004; Schaufeli & Dierendonck, 1993).

Validity of the MBI-HSS was also demonstrated in several ways. First, an individual's scores were correlated with behavioral ratings from a friend of that individual, such as a spouse or coworker. Second, scores were correlated with the presence of certain job characteristics that were considered to contribute to burnout. Third, scores were correlated with measures of other outcomes that had been hypothesized to be related to burnout (Maslach & Jackson, 1981; Maslach & Jackson, 1996).

Burnout Measure

Trailing only the MBI, the Burnout Measure (BM) is the second most widely used self-reported measure of burnout (Pines & Aronson, 1988). The BM measures different dimensions of burnout than does the MBI-HSS. These dimensions identified as Demoralization, Exhaustion and Loss of Motive. The BM subscales have been found to be highly correlated with fatigue and with the Emotional Exhaustion dimension of the MBI-HSS. Because the BM captures only a particular aspect of burnout (Emotional Exhaustion) and is primarily a measure of general well-being, it is suggested that it be supplemented by a scale that also assess the attitudinal

component of burnout (Enzmann, Schaufeli, Janssen, & Rozeman, 1998; Schaufeli & Dierendonck, 1993). The dimensions of the BM have been found to be highly correlated with stress (Shirom & Ezrachi, 2003).

Copenhagen Burnout Inventory (CBI)

The Copenhagen Inventory was originally designed to overcome problems that Kristensen et al. (2005) noted in relation to the MBI-HSS. The authors argued that burnout primarily consist of fatigue (or Exhaustion) and that the other dimensions of the MBI (Depersonalization and Personal Accomplishment) are not part of the burnout phenomenon. Kristensen et al. identified six reasons not to use the MBI-HSS. These reasons, as well as rebuttals or responses from Schaufeli and Taris (2005), are as follows:

1. **Circularity.** Burnout, as measured by the MBI-HSS, is by definition restricted to the human services. Response: This was indeed the case until 1996, but the MBI-GS was developed to address any profession, not just human service professionals.
2. **Unclear relationship between the MBI and the burnout concept.** Response: Kristensen et al. felt the MBI and concept of burnout do not match because the MBI includes three different measures. Response: Cutoff scores for the MBI have been developed in the Netherlands that allow the scores to be combined in order to discriminate burnout from nonburnout cases.
3. **A mixture of an individual state, a coping strategy, and an effect.** Burnout as measured by the MBI-HSS is composed of distinct aspects- an individual state (represented by Emotional Exhaustion), a coping strategy (represented by Depersonalization), and a consequence

(represented by Personal Accomplishment). Response: There is nothing wrong with combining an individual state with specific coping behaviors.

4. Unacceptable questions. Some MBI-HSS items trigger hostile responses due to the nature of the wording. Response: A wealth of studies documents the cross-national validity of the MBI-HSS.
5. It is unclear what the MBI-GS measures. Response: This is explained clearly in the MBI Test Manual. The MBI-GS defines burnout as a crisis with an individual's relationship with work, not necessarily with people at work.
6. The MBI is not available in the public domain. Material is copyright protected and distributed by a commercial publisher. Response: Schaufeli and Taris (2005) agree that this is an undesirable situation, but the MBI is used freely by many in the scientific community.

While Schaufeli and Taris did agree with some of the problems regarding item wording and public access to the MBI-HSS, they did not share concerns associated with the theoretical use of the MBI-HSS.

Although the CBI is currently not the burnout inventory of choice, it has been used in several studies. Milfont, Denny, Ameratunga, Robinson, and Merry (2007) found the CBI had acceptable reliability as well as factorial and criterion-related validity when used to measure burnout in New Zealand teachers.

Oldenburg Burnout Inventory (OLBI)

The OLBI, originally developed in Germany, is based on a similar model as that of the MBI-GS, but only measures exhaustion and "disengagement". It also addresses the negative

phrasing of the MBI, which has drawn criticism from many. The OLBI counters this negative phrasing by using both positive and negative wording. The OLBI is said to have a broader conceptualization of burnout, measuring both the cognitive and physical components of exhaustion (Cox et al., 2005). Demerouti, Bakker, Vardakou, and Kantas (2003) compared the OLBI to the MBI-GS (instead of the MBI-HSS) and found both instruments exhibited reliabilities greater than .70. Convergent validity of both instruments was also found to be strong although not identical.

As previously mentioned, the OBLI was developed in Germany. As of today, the OBLI has yet to be translated into a working English-speaking instrument. As a result of this limitation, few studies involving English-speaking samples have used the OBLI. This is largely due to a lack evidence that the OBLI can indeed be effectively translated into English and still be psychometrical acceptable (Halbesleben & Demerouti, 2005).

Athletic Training Burnout Inventory (ATBI)

Although the MBI has historically been the overwhelming choice for measuring burnout in the athletic training community, this may not always be the case. Clapper and Harris (2008) have recently developed the Athletic Training Burnout Inventory (ATBI). This instrument, which includes the MBI-HSS plus an additional 45 items, addresses established factors that lead to burnout as well as workload issues that are specific to the athletic training profession. After two pilot tests, the final version of the ATBI consisted of four constructs: emotional exhaustion and depersonalization, administrative responsibility, time commitment, and organizational support. Although the ATBI was found to be reliable, some problems were identified with item-to-total

correlation within two of the constructs (Clapper & Harris). The ATBI was also developed primarily to examine burnout at the NCAA Division I level, although it is reasonable to assume that the instrument could also be used for athletic trainers who are employed at any level or work setting. The prospects are promising for using the ATBI sometime in the near future, but the authors confess that the instrument needs further modifications and additional testing to further establish its reliability and validity for assessing burnout in athletic trainers before it is used on a larger scale.

Burnout in Other Professions

The MBI has been used in a wide range of projects that cover many professions including physicians (Asai et al., 2007), physical therapy (Balogun et al., 2002), law enforcement, counselors (Lambie, 2006), and mental health workers to name a very few. Two professions, teaching and nursing, draw special attention because both have been somewhat saturated with projects using the MBI. These two professions are discussed more in the following paragraphs.

Freudenberger (1974) stated those who were “dedicated and committed” were the ones most prone to burnout. He also noted that the ones who feel a continuous need to give are also at risk. These characteristics can be identified in many professions, many of which involve constant interaction with others. Benevides-Pereira and Alves (2007) stated that when individuals are in a burned out state they may start to bring those around them down. This statement takes on greater significance in professions where burned out professionals are directly responsible for the health and safety of those they serve whether this be patients, students-athletes, or the general public.

Teaching

Fimian and Blanton (1987) found that work stress and satisfaction with workload were both major predictors of emotional exhaustion in educators. Ozdemir (2006) found no difference between male and female teachers, no difference in burnout rates between teachers who teach AD/HD students and those who taught non-AD/HD students. Brewer and McMahan (2003) found that the lack of organizational support was pronounced for teachers, but that burnout rates for this group were average overall. Furthermore, the authors found that gender and amount of time devoted to research could predict differences in Emotional Exhaustion and Personal Accomplishment.

Nursing

Perhaps no other profession has used the MBI-HSS more than that of nursing. Nursing is consistently recognized as one of, if not the primary allied health profession, that suffers burnout more than any other. While examining a majority of this research would be unwarranted, a few studies are noteworthy. Kennedy (2005) found that Registered Nurse's experienced high levels of burnout. This was attributed primarily to high levels of stress and high patient loads. This finding has been supported by numerous other studies including Novak and Chappell (1994) and Buhler and Land (2004) to name a very few. Although an overwhelming majority of studies have found nursing to be highly prone to burnout, some studies seem to contradict these findings. For instance, Happell et al. (2003) found that forensic nurses reported lower levels of burnout and higher job satisfaction than their

counterparts from the mainstream services, and they attributed this to greater involvement in decision making and better support among forensic nurses.

National Athletic Trainers Association

Although the roots of athletic training can be traced back many years, it was not until 1950 that a national organization was formed. After persevering through many years of failed attempts to organize nationally, a group of about 200 athletic trainers finally accomplished this feat at a meeting held in Kansas City, Missouri, and the National Athletic Trainers' Association (NATA) was born. The primary purpose of the NATA was to develop professional standards for those wanting to practice as athletic trainers (O'Shea, 1980). Today, the stated mission of the NATA is to enhance the quality of health care provided by certified athletic trainers and to advance the athletic training profession (National Athletic Trainers Association, 2008). Since 1950 membership has increased steadily, and as of January 2008 total membership for certified members and nonmembers stood at over 30,000 individuals (National Athletic Trainers Association). The NATA continues to provide leadership and guidance for those already employed as athletic trainers as well as serving as a valuable resource for those interested in the profession.

Athletic Training Defined

Unfortunately, the general public still has a flawed view of what an athletic trainer is and what one does for that matter. For many, the terms "athletic trainer" and "personal trainer" are one in the same. A perfect illustration of this misunderstanding can be seen in a

2007 edition of the Parade magazine. The Parade magazine is a publication that is periodically circulated as an insert in larger national or regional newspapers. In a section examining the best job opportunities for the future, athletic training was identified as one of the “Hottest Jobs (No college degree required)”. A brief description of athletic training was stated as follows, “A growth business, due to the spread of health clubs”. While athletic trainers may find employment opportunities in settings such as health clubs, a college degree is required to work in the athletic training profession. The article had obviously confused personal trainers with athletic trainers. And while these two professions may work with the same populations, educational requirements for becoming a personal trainer versus an athletic trainer are quite different. Personal trainers are primarily involved in an individual’s exercise regimen and routine. Personal training as a profession is not a regulated one. Any individuals can call themselves a personal trainer, whether or not they have the appropriate knowledge or experience to do so. With that said, there are credible organizations that exist, such as the National Strength and Conditioning Association (NSCA), that provide certifications for those wishing to become personal trainers or strength and conditioning specialists. The NSCA is a nonprofit, educational organization established in 1978 that provides resources and opportunities for professionals in strength and conditioning and related fields. It is a highly respected organization that primarily offers two certifications, the Certified Strength and Conditioning Specialist (CSCS) and the National Strength and Conditioning Association-Certified Personal Trainer (NSCA-CPT). The NSCA serves as a clearinghouse for the dissemination of strength training and conditioning and personal training information and is recognized as the worldwide authority on strength and conditioning for improved physical performance. The

NSCA boasts membership of over 30,000 individuals in over 50 countries (National Strength and Conditioning Association, 2008). Unfortunately, certifications offered by the NSCA are not mandated by most organizations or potential employers.

The athletic training profession is different. Recognized by the American Medical Association (AMA) as an allied health profession in 1990, athletic training is regulated at both the state and national levels. Certification is not only recommended but required in most states. Furthermore, many states not only require Board of Certification (BOC) certification but specific state licensure or certifications as well. Anderson, Hall, and Martin (2000) state that licensure is the strictest form of state regulation and as such is the most effective means of protecting the public. Licensure is necessary to protect the general public, ensure public safety, maintain minimum standards in the practice of athletic training, and promote the highest degree of professional conduct on the part of the athletic trainer. State licensure ensures that only those appropriately qualified can call themselves athletic trainers (Rello, 1996). As of March 1, 2008, only seven states (California, West Virginia, Maryland, Wyoming, Colorado, Hawaii, and Alaska) did not have specific state requirements (referred to as licensure, certification, or registrations) needed to practice as an athletic trainer (Board of Certification, Inc, 2008).

Athletic trainers work primarily with athletes and are considered specialists in a number of different areas that fall under the umbrella of sports medicine (Prentice, 2006). Schlabach and Peer (2008) state that athletic trainers “specialize in the prevention, assessment, treatment, and rehabilitation of injuries and illnesses that result from physical activity” (pg 7). Perhaps no single individual plays a more vital role in serving the needs of the athletic team

than does the athletic trainer. Athletic trainers have been defined in the following way by the American Academy of Family Physicians, the American Academy of Pediatrics, the American Orthopedic Society for Sports Medicine, NATA, and the BOC, “An athletic trainer is a qualified allied health care professional educated and experienced in the management of health care problems associated with sports participation. In cooperation with physicians and other allied health care personnel, the athletic trainer functions as an integral member of the athletic health care team in secondary schools, colleges and universities, professional sports programs, sports medicine clinics, and other athletic health care settings. The athletic trainer functions in cooperation with medical personnel, athletic administrators, coaches, and parents in the development and coordination of efficient and responsive athletic health care delivery systems” (Board of Certification, 2008; ; National Athletic Trainers Association, 2008; Schenck, 1997).

Athletic trainers serve as a critical link between the sports program and the larger medical community (Anderson et al., 2000). Athletic trainers spend countless hours interacting with and getting to know their athletes. Because athletes often have daily contact with their athletic trainers, they are most likely to seek help from the athletic trainers before any other member of the sports medicine team. Accordingly, it is the athletic trainer who primarily directs where the athlete will obtain the appropriate medical treatment (Schenck, 1997). As is often the case, it is the athletic trainer who plays a large role in treating and rehabilitating the injuries athletes incur. According to research conducted by Albohm, Campbell, and Konin (2001), athletic trainers provided the same level of outcomes, value, and patient satisfaction as did physical therapists in a clinical setting.

Roles and Responsibilities of an Athletic Trainer

The BOC defines what knowledge, skills, and abilities an entry level athletic trainer should have before seeking employment in the athletic training profession (Anderson, Parr, & Hall, 2009). This information is periodically updated and published in the Role Delineation Study. The 5th edition of the Role Delineation Study (Board of Certification, 2004) defines the major performance domains for the entry-level athletic trainer as follows:

Domain I: Prevention

This domain requires that the athletic trainer be able to recognize and address potential problems associated with participation in sports or fitness training. Examples include being able to properly fit athletic equipment, perform appropriate preparticipation examinations, and monitor various environmental conditions.

Domain II: Clinical Evaluation and Diagnosis

This domain requires that the athletic trainer be able to evaluate a wide variety of musculoskeletal injuries. The athletic trainer should be able to conduct a thorough and systematic evaluation of injuries that happen during the normal course of athletic participation. Athletic trainers should be able to palpate injuries and perform appropriate functional and special tests as necessary.

Domain III: Immediate Care

This domain requires that the athletic trainer be able to deal with, and effectively treat, injuries that are potentially life-threatening. This domain would include performing first-aid on all injuries as needed as well as developing emergency action plans.

Domain IV. Treatment, rehabilitation, and reconditioning

This domain requires that the athletic trainer be able to develop and administer rehabilitation programs as needed. Athletic trainers should be well-versed in the operation and application of rehabilitation equipment and modalities that could be used for a wide variety of therapeutic purposes.

Domain V. Organization and administration

This domain requires that the athletic trainer have the knowledge needed to manage a healthcare facility. This would include being able to develop policies and procedures manuals, maintaining appropriate medical records (including evaluation and treatment documentation), and understanding the many legal ramifications involved with working in an allied health setting.

Domain VI. Professional responsibility

This domain focuses on the responsibility of athletic trainers to conduct themselves in a professional manner at all times. The NATA Code of Ethics and the BOC Standards of Professional Practice serve as guiding documents meant to help members direct their professional behavior.

Certification Requirements for the Athletic Trainer

Those wishing to become athletic trainers must take and pass a certification examination developed by the Board of Certification, Inc. (BOC). The BOC sets the standards for the practice of athletic training and is the only accredited certifying body for Athletic Trainers in the United States. The certification process ensures that individuals meet the requirements needed to successfully practice as an entry-level athletic trainer. The BOC,

formally an entity of the NATA, became an independent nonprofit corporation in 1989 and is responsible for establishing the requirements needed to maintain the ATC status. The stated mission of the BOC is as follows: “To certify Athletic Trainers and to identify, for the public, quality healthcare professionals through a system of certification, adjudication, standards of practice and continuing competency programs” (Board of Certification, 2008).

To be eligible to take the BOC examination, students must attend and graduate from an entry-level athletic training education program that is accredited by the Commission on Accreditation for Athletic Training Education (CAATE). Another certifying body, the Commission on Accreditation of Allied Health Education Programs (CAAHEP), maintained this role until June 30, 2006. As of March 1, 2008, CAATE was responsible for the accreditation of over 350 professional entry-level athletic training education programs nationwide. Athletic training education programs are developed by using 12 professional content areas as identified by the Education Council. The Education Council is an organization within the NATA that deals with matters related to athletic training education. The council is specifically responsible for ensuring all athletic training education programs are continuously improving and evolving to best prepare the next generation of athletic trainers. The 12 professional content areas as stated by the Education Council are:

1. Risk Management
2. Pathology of Injuries and illness
3. Orthopedic Assessment and Evaluation
4. Acute Care of Injury and Illness
5. Pharmacology

6. Therapeutic Modalities
7. Therapeutic Exercise
8. Medical Conditions and Disabilities
9. Nutritional Aspects of Injuries and Illnesses
10. Psychosocial Intervention & Referral
11. Health Care Administration
12. Professional Development & Responsibility (NATA Education Council, 2008)

To ensure this material is covered, the educational program should provide students the opportunity to take foundational courses in human anatomy and physiology, nutrition, exercise physiology, kinesiology, therapeutic modalities, acute injury and illness, strength and conditioning, and experimental design. In addition to the formal instruction in these courses, students must also complete what is known as “Clinical Education” over the course of 2 years minimally (Pfeiffer & Mangus, 2008). Clinical education gives students an opportunity to apply what they have learned in the classroom in a real-life, clinical setting. This is primarily achieved through working with various athletic teams or through clinical rotations.

Upon graduation, students will need the following items to register for the examination.

1. An endorsement of the exam application by the recognized Program Director of the CAATE accredited education program and
2. Proof of current emergency cardiac care certification (Board of Certification, 2008).

Taking the certification exam is usually an all-day process with time given for lunch as appropriate. The examination itself consists of three sections: a written section, a practical

section, and a simulation section. Beginning in 2007, the exam was transitioned into a fully computer-based model.

Burnout and Athletic Training

Despite the impressive amounts of research conducted on the topic of burnout in other allied health professions, surprisingly little had been done in the field of athletic training; that is until the early 2000s. After only sporadic research was conducted throughout a majority of the 1990s or earlier, a growing number of individuals turned their attention to burnout and completed master's or doctoral work on this topic. Many of these are addressed below. Gieck et al. (1982) were the first to examine burnout, referred to then as "burnout syndrome", among athletic trainers. Gieck et al. identified six areas as major stressors for athletic trainers. These areas being: (1) Athletic trainers as health professionals are required to give emotionally without consideration of their own needs. (2) The profession, by its very nature, is stressful. (3) Overworked (4) Must make multiple decisions and maintain difficult schedules that often require travel (5) Females may be limited in what they are allowed to do because of their gender and may have misguided views of the job if they did not work with major sports such as football. (6) Athletic trainers often realize there is a difference between what they are allowed to do and what they are actually educated to do. Gieck et al. stated that if steps are not taken to recognize and address these potential stressors, the athletic trainer is a prime candidate for burnout. An active outside life, proper health habits, restructuring behavior, and taking control of one's working environment were mentioned as channels that could be used to combat the

burnout syndrome. In later works, Gieck (1984) revisited stress and the athletic trainer and expanding on some of his views regarding how to successfully prevent the process.

Another pioneer in athletic training research was Capel. Capel (1986) conducted a study investigating the relationship of five psychological and organizational variables with burnout in athletic trainers. Participants, all from the Western United States, completed self-reported measures of burnout, role conflict, role ambiguity, locus of control, and demographic variables. The study used the Maslach Burnout Inventory, a role conflict and a role ambiguity scale, a locus of control scale, and a demographic data sheet. Results from this study found that burnout rates among athletic trainers were generally low. Subjects did experience higher levels of Emotional Exhaustion than Depersonalization, although both were lower than average. Multiple regression analysis indicated that role conflict, number of hours worked, locus of control, and role ambiguity collectively predicted burnout, with role conflict contributing most to this prediction. Of some interest to the current study, when the demographic variables were analyzed, place of employment was found to be the most significant individual factor related to burnout. Results indicated that NCAA Division II and III athletic trainers experienced the highest frequency of burnout followed by NCAA Division I, then high school athletic trainers. These findings seem to be at odds with those found by Christensen (1997). Christensen concluded the following from his research: (1) Burnout, using the MBI, is low for athletic trainers in the collegiate setting. (2) Regardless of division or setting, athletic trainers do not differ in their respective levels of burnout. However, younger athletic trainers did experience higher degrees of emotional exhaustion compared to older athletic trainers. Additionally, athletic trainers who worked with small staffs experienced higher degrees of depersonalization

than others. (3) Regardless of hours worked and the number of staff, the MBI dimensions are not affected. (4) Athletic trainers experience the same level of burnout as do occupational and physical therapists. Similarly, Kelsey (2002) found that collegiate athletic trainers worked more hours per week on the average, around 55, than did ATs in other settings, perhaps making them more vulnerable to burnout. However, Kelsey also identified trait anxiety, not place of employment, to be the best predictor of burnout.

Capel (1990) was also the first to examine attrition as it was related to burnout in athletic trainers. In this research, Capel identified time commitments, low salaries, limited opportunity for advancement, poor working conditions, and conflicts with coworkers as major reasons for individuals leaving the athletic training profession.

In other athletic training research, Marcus (1993) used the MBI-HSS to investigate the burnout levels of athletic trainers in the state of Massachusetts. The author found that the overall burnout rate of this population was low with the burnout scores of Emotional Exhaustion and Depersonalization below average and the Personal Accomplishment score being high.

Athletic Training Studies Indirectly Related to Burnout

Several studies have examined factors that could play a role in leading to burnout, although burnout itself was not the primary emphasis of the research. For example, Dingle (2002) conducted a study to identify the causes of occupational stress and coping strategies used by athletic trainers in Indiana. And as discussed earlier, high levels of stress are often correlated with burnout. Dingle found a significant association between gender and certain

causes of stress. More specifically, results indicated that males were primarily stressed more by administrative duties, lack of time with spouse and children, and financial concerns. There were no significant findings in regards to causes of occupational stress among females. In regards to work settings, athletic trainers working in colleges and professional sports were caused more stress by coaches, while those in working in high schools and clinics had more issues with coworkers. Other research conducted by Reed and Giacobbi (2004) found that certified graduate athletic training students experienced stress in six general dimensions. These identified as being (1) Stress of Athletic Duties (i.e. supervisory role of undergraduate students, injury care and prevention, documentation, and communicating with others), (2) Comparing Job Duties (some felt that they were doing more than others), (3) Stress of Being Students Themselves, (4) Time Management Issues, (5) Social Evaluation (i.e. demonstration of ability, labeled as a student, self-presentation, pleasing others), and (6) Concerns about the Future.

Campbell, Miller, and Robinson (1985) conducted an investigation in conjunction with the 1985 NATA Symposium. Using a questionnaire designed to assess stress levels and the occurrence of specific medical conditions that resulted from fatigue and substance abuse, Campbell et al. (1985) found that 40.7% of the respondents reported fatigue, 30.3% reported irritability, and 24.9% reported weight management problems. Again, the connection between stress and burnout shouldn't be overlooked. Although this study did not specifically focus on burnout, many of the physical problems that were associated with exposure to certain stressors are consistent with symptoms mentioned in research that does target burnout.

Burnout and the High School and Collegiate Athletic Trainer

There have been several studies conducted on athletic trainers employed at either the high school or the collegiate level. Research conducted at the high school level includes Nierman (2007), Baker (2004), Jervas (2004), and Kauk (1990). Nierman (2007) examined the stress and burnout levels of high school athletic trainers in the state of Ohio. The MBI served as one of the primary survey instruments for this study. Nierman used the variables of gender, geographic location, location of practice, years of experience, and age to search for any significant relationships or differences; none of which were found at any level. Kauk and Baker specifically looked at high school athletic trainers in the state of California and both used the MBI as their primary research instrument. However, each project had a slightly different focus. Kauk was interested in the prevalence of burnout in this particular population, while Baker was primarily trying to identify what factors affected the overall process of burnout. Kauk found that burnout did exist within this group, although the prevalence appeared to be less than that experienced by other human service professionals. Likewise, Baker also found that California high school athletic trainers were experiencing burnout but at a relatively modest rate. Results indicated moderate levels of burnout across all three dimensions of the MBI (Personal Accomplishment, Depersonalization and Emotional Exhaustion). Furthermore, within the Depersonalization dimension, a correlation was identified between the number of athletes served and the ATCs subscale score. Tanaka (2001) also used the MBI to examine the burnout levels of ATCs in California, but subjects were not specifically selected because they were either high school or college ATCs. Instead, ATCs at all levels were used in the study. Tanaka found no significant differences between gender and professional experience groups within California

athletic trainers. Mean scores were found to be in the low or moderate category in all three MBI subscales. Similar findings were reported by Campbell (2003) who found no differences in the burnout rates between high school and collegiate athletic trainers in Indiana.

Jevas (2004) examined burnout in Division 4A and 5A high schools in Texas. The purpose of the study was to determine if a particular metamotivational state profile or dominance was related to burnout. Jevas used the Burnout Measure instead of the MBI for this study while acknowledging the Burnout Measure is the second most widely used self-report measure of burnout, behind the MBI. Jevas found that as that paratelic and conformist subscales scores increased, the potential for burnout decreased, while an increase in the autic-sympathy subscale increased the potential for burnout. The study also found that stress from the parents of athletes, the coaching staff, and administrators was significantly correlated with burnout.

Hendrix et al. (2000) conducted research focused on stress and burnout in athletic trainers specifically at NCAA Division I-A universities. The authors hypothesized that high caseloads, more contact hours, locus of control, and role conflict were all sources of stress for these athletic trainers. Several instruments in the study including the Hardiness Test (Personality), the Social Support Questionnaire, the Athletic Training Issues Survey, the Perceived Stress Scale, and the MBI. Hendrix et al. found that athletic trainers who scored lower on hardiness and social support and higher on athletic training issues tended to have higher levels of perceived stress. These findings would seem to indicate athletic trainers with high hardiness scores would be more productive employees because they are better able to adjust and cope with stressful events that tend to lead to burnout. Research conducted by

Shapiro (1987) would seem to support this belief. Shapiro found that a hardy personality did significantly predict whether athletic trainers were satisfied with their jobs. Campbell (2003) also found personality played an important role in determining burnout. However, research conducted in other professions seems to be at odds with each other, with some studies indicating hardiness to be important (Talarico, 1989) and others, specifically in allied health professions, having found no direct correlation between personality hardiness and burnout (Toscano & Ponterdolph, 1998). In regards to the MBI, Hendrix et al. (2000) found higher perceived stress scores were related to higher Emotional Exhaustion and Depersonalization and lower levels of Personal Accomplishment. The authors also concluded that NCAA Division I athletic trainers experienced burnout at rates that were comparable to coaches and coach-teachers.

Kania (2005) also conducted research that focused on the college and university athletic trainer, although no single classification was singled out. Kania found that ATCs in the study experienced low to average levels of burnout. In addition, personal and environmental characteristics were found to be predictive of burnout. Results from the study indicated that personal characteristics (identified as age, gender, number of children, education level, number of attempts needed to pass the certification exam, years in athletic training postcertification, number of jobs since certification, athletic training program degree received from, relationship status, hours spent in leisure activities, current stress level, and NATA district membership) accounted for 45.5% of the variance in emotional exhaustion, 21.5% of the variance in depersonalization, and 17.8% of the variance in personal accomplishment. Environmental characteristics (identified as NCAA division, total number of athletes at the institution, number

of athletes per ATC, number of varsity sports, number and type of sports ATC is responsible for, number of hours worked per week in-season and off-season, number of days per week worked in-season and off-season, current part of the season, additional roles on-campus, additional roles off-campus, other staff gender and experience levels, salary, ATEP accreditation status, number of years at current institution, job title, injury type frequency, and pressure from coaches) accounted for 16.7% of the variance in emotional exhaustion, 14.4% of the variance in depersonalization, and 10.4% of the variance in personal accomplishment. Taken as a unit, personal and environmental characteristics predicted 51.0% of the variance in emotional exhaustion, 27.7% of the variance in depersonalization, and 25.8% of the variance in personal accomplishment. Kania also found that stress level and coaching pressures were the single most significant characteristics related to burnout.

Females and Athletic Training

Gieck et al. (1982) were the first to discuss females in the athletic training setting. The authors described two situations the female athletic trainer commonly experienced. The first scenario involved a female athletic trainer who had spent a majority of her time with women's athletics in college. Now certified, this female is often unprepared to deal with the pressures involved with many male sports such as football. The second scenario describes just the opposite, a female who had spent most of her time with male sports who then becomes disheartened dealing with the less demanding female sports.

Mazerolle (2005) discusses the difficulty athletic trainers often encounter because they frequently wear many hats; parent, spouse, caregiver, employee, and homemaker. It is in the

role of homemaker that gender often comes to the forefront. While men and women both contribute at home in their own unique ways, it is primarily the female who claims the home as her domain. This concept also applies to child care. Stahl (2003) states that women, no matter how progressive their partner is in sharing parenting duties, are generally the ones who perform infant care. Manigold and Hunt (2007) described motherhood and athletic training as “The Great Balancing Act”.

Like many burned-out females in other professions, Stahl (2003) found that some female ATCs leave the profession entirely when the decision to have children has been made. This may eliminate experienced professionals who have spent years mastering and refining their clinical skills. One individual quote found in an article written by Stahl states that, “I think it is virtually impossible to maintain the ATC role without leaving the profession. Eventually all (veteran) women athletic trainers who are parents will leave unless they have 9-to-5 jobs, like in a clinic” (pg26).

It is also quite possible that the additional stress of coming home to a “second job” could push some women closer to burnout, especially if they have no coping mechanisms in place. McMullan (1996) discusses how a NATA Women in Athletic Training Survey Report found that females did indeed experience greater conflict than men between professional and family responsibilities. Females also reported having a greater difficulty re-entering the profession after leaving for family responsibilities as well as having greater difficulty balancing career and family. An overwhelming majority (84%) stated that men were given preference when head athletic training jobs came open.

Athletic training research that has specifically addressed gender in relation to burnout (Nierman, 2007; Tanaka, 2001) has found little or no differences between men and women. Dingle (2002) did find that women seemed to handle or cope with stress in different ways than men, finding women are more likely to talk to a friend or coworker about their problems, while men were more likely to seek alcohol.

Women are still the minority at many levels within the athletic training profession, especially in NCAA Division I athletics. Few women hold the position of head athletic trainer in most major “football” schools. This trend holds true in most professional sports with only 3% of females being hired as athletic trainers at the professional level (Graham & Schlabach, 2001; Rankin & Ingersoll, 2001). Chung (2006) offers some interesting insights as to why this may be the case. Chung distributed a survey to head and assistant athletic trainers employed by the National Football League, National Basketball Association, National Hockey League, Major League Soccer, and Major League Baseball. The survey was intended to measure opinions regarding females working in professional male sports. The majority of those who returned the survey agreed that female athletic trainers were competent and skilled enough but the potential for sexual harassment, access to locker room, and professional sports organizations have kept female athletic trainers from being hired in professional male sports. Perhaps the most intriguing part of this research was the statements made by some of the respondents. While many of the comments were positive and indicated that females were just as qualified as males, others offered some interesting insight:

- “I signed in as an NFL trainer although I work in the Arena Football league. I have had female interns and a female assistant. I would try never again to be in that position. I

would not hire a female for the setting if at all possible. I think that in today's society the chance of a sexual harassment claim is significant. I also had problems with the trainers having personal relations with the players."

- "The locker room setting has long been considered a boy's club. There have been instances where some players feel uncomfortable with a female in attendance, and have been less apt to fully divulge their injury/health history."
- "It is less of an issue females not being capable and more an issue of privacy and decency that is a significant limitation, and having a member of the opposite sex in such close proximity to athletes changing and showering is not socially accepted and is one that would never be allowed in the opposite setting (male ATC in a female locker room)."
- "Women can do the job, but it is not easy with the backwards mentality that still exists in certain male professional sports."
- "Females ATCs are not wanted by most organizations because they are a distraction in the locker room."
- "Stay out of male professional sports."

Chung (2006) stated that female athletic trainers still face potential barriers that can lead to the glass ceiling effect.

Shingles (2001) also found that sexual harassment was a potential problem for females entering the athletic training profession. However, Shingles stated that many subjects felt they were adequately prepared to deal with such situations and that most of the inappropriate comments coming from male athletes or coaches were not perceived as true harassment at all

and most comments were dismissed as “boys being boys”. However, the author added that many females may not recognize sexual harassment when it happens to them. Shingles suggests the NATA and individual academic programs need to do a better job of addressing this sensitive issue.

Shingles (2001) also found women felt they were not only oppressed because of their gender, which primarily came from male coaches, but because of their race or ethnicity and sexuality as well. Most subjects in the study did not perceive being a female certified athletic trainer was unique, as almost 50% of the NATA membership was then female. Women were proud to be athletic trainer’s period, not “women” athletic trainers. In most instances, women felt they were trained on par with their male counterparts. However, the author did state that women are still systematically disempowered by gender, particularly when working with male coaches. The author states that male hegemony in sport creates a culture such that male coaches act in supervisory roles to female ATCs. In this respect, women who enter the male domain can be disregarded and disrespected, including challenges to decision making regarding athletic injury care and sexual harassment.

As previously discussed, gender differences as they are related to burnout have been examined in other allied professions. For example, McMurray et al. (2000) identified gender differences in both the experience of and satisfaction with medical practice. Females were more likely to report satisfaction with their specialty and with patient and colleague relationships but less likely to report satisfaction with autonomy, relationships with the community, resources, and pay. Time pressures were also found to be greater for women.

Research regarding gender and its relationship to athletic training is insufficient at this time and should be continued (Brown, 2003; Hendrix et al., 2000) in hopes of better understanding this process.

Summary

The athletic training profession is one of caring about and serving the athlete (Rankin & Ingersoll, 2001). Although these highly motivated individuals may start their careers with high hopes, it is not uncommon for them to quickly feel overwhelmed by their jobs (Pines & Aronson, 1988). Unfortunately, expectations of the athletic trainer can be taken to the extreme. Some coaches or other administrators often assume athletic trainers should be available 24 hours a day at the drop of a hat to serve the needs of the department. Personal time or professional boundaries are often ignored. For many athletic trainers, it is accepted practice not to have set schedules, making planning outside events or family activities difficult at best. Furthermore, ATCs are routinely expected to work long hours with no extra pay for overtime, which often only intensifies the pressures of the job (Hill, 2002; Mazerolle, 2005). It is because of these pressures ATCs may be prone to burnout.

Measuring burnout is difficult, but an overwhelming majority of research supports the use of the MBI as this instrument has been used in over 91% of all studies examining burnout (Cox et al., 2005; Gorter et al., 1999; Maslach & Jackson, 1996; Richardsen & Martinussen, 2004; Schaufeli & Enzmann, 1998).

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

Athletic training is a service profession, and job expectations for many certified athletic trainers (ATCs) are often very demanding, given their obligations to multiple teams, individual participants, teaching, clinical care, and the administrative tasks involved in providing appropriate medical coverage (Brumels & Beach, 2008). If left unchecked, these demanding loads can lead to professional burnout. Although a definitive definition of burnout can be difficult to grasp, the detrimental impact it can have on an individual's personal and professional life is abundantly clear. Although burnout can, and does, occur in many professions, it is the service and allied health professions that seem to encounter this problem more frequently than others. As a service profession, athletic training is included in this high risk group. Until recently, research involving athletic trainers and burnout was sporadic at best, and no research could be found that specifically focused on the regions of Southwest Virginia and Northeast Tennessee.

Therefore, the primary purpose of the study was to determine the burnout potential for selected certified athletic trainers (ATCs) employed in the regions of Southwest Virginia and Northeast Tennessee. A second purpose was to identify what personal and professional variables are most correlated with each of the three dimensions of the MBI-HSS in the selected population. A third purpose of the study was to examine what effect gender may play in the

process of burnout. The final purpose of the study was to identify the most common sources of stress for ATCs in the research population.

Research Design

The study used a survey design and was conducted using an on-line protocol. The survey had a three-part design. Part 1 of the survey garnered information that deals with personal and professional variables such as age, gender, work setting, position title, salary range, etc. Part 2 of the survey was a modified version of the MBI-HSS. Permission to use the modified version of MBI-HSS was obtained from the CPP, Inc (Appendix A). However, due to copyright protection, the entire survey was not permitted to appear in the appendix, only selected questions. Part 3 of the survey was used to identify the most common sources of stress subjects encounter in their work settings.

Participants

Participants for the study consisted of selected licensed athletic trainers employed in Northeast Tennessee and Southwest Virginia. Subjects were selected from 13 counties that form Northeast Tennessee and 17 counties and 4 cities that form Southwest Virginia. Defining exactly which counties form Northeast Tennessee, formerly referred to as Upper East Tennessee, was not necessarily a straightforward process. Morgan and Brinkman (1995) found the change in terminology was spearheaded primarily by agencies who believed the name change would increase tourism and attract new industry to the region. For the purpose of the this study, Northeast Tennessee was defined as the counties of Claiborne, Grainger, Jefferson,

Cocke, Greene, Hamblen, Hancock, Hawkins, Unicoi, Washington, Sullivan, Carter, and Johnson. Defining Southwest Virginia presented similar challenges. Some define this region as 17 counties and 4 independent cities (Welcome to Virginia's Great Southwest, 2008), while others put this number as high as 27 counties with 7 independent cities (Radford University, 2008). For this study, the 17 counties forming Southwest Virginia were defined as Giles, Montgomery, Floyd, Carroll, Pulaski, Bland, Wythe, Grayson, Smyth, Tazewell, Buchanan, Russell, Washington, Scott, Dickenson, Wise, and Lee Counties. The 4 independent cities of Galax, Bristol, Norton, and Radford were also included in this definition.

Both Virginia and Tennessee have state athletic training organizations that provide a wealth of information about the profession as well as detailed instructions required to become an athletic trainer in each particular state. To become licensed in the state of Tennessee, individuals must meet the following criteria as specified by T. C. A. TITLE 63:

1. Have met the athletic training curriculum requirements of a college or university approved by the board and provide proof of graduation; and
2. Satisfactorily completed all of the National Athletic Trainers' Association (NATA) Board of Certification, Inc. qualifications and be certified as an athletic trainer in good standing by the National Athletic Trainers' Association Board of Certification, Inc., or approved by the board.
 - a. An out-of-state applicant must possess the stated qualifications of subdivision (a). Upon receipt of the initial athletic trainer licensure fee, the board may grant, without examination, a license to any qualified nonresident athletic trainer who holds a valid license or certificate issued by another state and whose

qualifications are deemed by the board to be at least equivalent to those required for licensure in this state; provided, that such other state extends the same privilege to qualified athletic trainers who are residents of this state. An out-of-state applicant from a state not having a licensure or certification act will be eligible to take the jurisprudence examination if certified by the National Athletic Trainers' Association Board of Certification, Inc., and approved by the board.

To become licensed in the state of Virginia, individuals must meet the following criteria:

1. Pass the BOC certification examination
2. Fill out the appropriate Board of Medicine paperwork
3. Provide proof professional education
4. Claims History
5. Jurisdiction Clearance
6. Activity Questionnaire
7. Pay fee

To identify participants in Tennessee, the website of The Tennessee Athletic Trainers' Association site (Tennessee Athletic Trainer's Society, 2008) was used. This site provides a service entitled "Find a Certified Athletic Trainer". Through this link, interested individuals are able to search for athletic trainers in a variety of different ways including by first or last name, city, zip code, or title. For this study, participants were selected by using the zip code search option. Zip codes were identified for each of the 13 Tennessee Counties and then searched

to identify all athletic trainers working in those counties. Additionally, the websites of all educational settings (high schools, colleges, and universities) within the research area were examined to locate ATCs who work in each. Because there is a small time delay in applying for and obtaining full state licensure, it is possible for individuals to be legally employed but not be included on the state website. Because most athletic trainers work in an educational setting of some sort, searching these particular sites had a higher likelihood of finding all those who have applied for licensure but had yet to appear on the website.

Similar procedures were followed to identify participants from Virginia. However, in Virginia it is the Virginia Board of Medicine that maintains licensure records. Going to the website (Virginia Board of Medicine, 2008) individuals are able to obtain the name and location of all those practicing as athletic trainers in the state. Additionally, Virginia participants were also identified by obtaining an e-mail list generated from the Virginia Athletic Trainers' Association. This list not only contained all athletic trainers who are licensed to practice in the state but, more importantly those individuals who are employed in Region VI, which contains the 17 counties and 4 independent cities that were used in the study.

Again, ATCs in both Virginia and Tennessee were excluded if they are not 18 years of age or older and not active members in the athletic training profession. Therefore, those ATCs who are students or retired were not included in the study. Athletic training also served as their primary profession.

Data Collection Procedures

After securing the names of the licensed athletic trainers in the specified counties of Southwest Virginia and Northeast Tennessee, e-mail addresses were obtained by visiting school, clinical, or personal websites if not found on the official state website. If e-mail addresses were not located in this manner, phone calls were made to secure e-mail addresses. An invitation to participate in the study was e-mailed to all those meeting the study criteria. This invitation described the purpose of the study, subject selection criteria, as well as addressing many of the informed consent concerns the study. Participants were then asked to go to a secure online site (Survey Monkey) and complete the survey if they choose to do so. The survey remained active for 3 weeks. E-mail reminders were sent to participants each week until the website was deactivated. Upon entering the website, participants had the choice of continuing the survey or exiting the site. It was estimated the survey would take 10-15 minutes to complete. Data from the completed survey were analyzed by using SPSS software. An alpha level of .05 was used to determine significance in all statistical calculations. Participation in the study was anonymous with no identifying markers collected with the data.

Data Analysis

Data were analyzed in the following manner to address the proposed research questions:

Research Question #1:

Are there significant differences in mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) among athletic trainers in Southwest Virginia and Northeast Tennessee when compared with the established mean scores of other allied health professionals? Single-sample t-tests were used to compare mean scores with each of the three dimensions of the MBI-HSS. In order to use the single-sample t-test, previously established mean scores for each dimension were obtained directly from 3rd Edition of the Maslach Burnout Inventory Manual (1996). For this, and subsequent questions, the occupational subgroup of “Medicine” were used as the primary comparison group.

Three null hypotheses were evaluated:

- Ho₁₁: There is no significant difference in mean score of the Emotional Exhaustion dimension when compared with subgroup norms established by the 3rd Edition of the Maslach Burnout Inventory Manual.
- Ho₁₂: There is no significant difference in mean score of the Depersonalization dimension when compared with subgroup norms established by the 3rd Edition of the Maslach Burnout Inventory Manual.
- Ho₁₃: There is no significant difference in mean score of the Personal Accomplishment dimension when compared with subgroup norms established by the 3rd Edition of the Maslach Burnout Inventory Manual.

Research Question #2:

Are there significant differences between the mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) between those employed in the clinical-high school setting and those employed in the college-university setting?

An independent sample t-test was used to determine if work setting played a significant role in the overall process of burnout. Three null hypotheses were evaluated.

Ho₂₁: There is no significant difference in the mean scores of the Emotional Exhaustion dimension of the MBI-HSS between those employed in the clinical-high school and those employed in the college-university setting.

Ho₂₂: There is no significant difference in the mean scores of the Depersonalization dimension of the MBI-HSS between those employed in the clinical-high school and those employed in the college-university setting.

Ho₂₃: There is no significant difference in the mean scores of the Personal Accomplishment dimension of the MBI-HSS between those employed in the clinical-high school and those employed in the college-university setting.

Research Question #3:

How accurately can scores of each dimension of the MBI-HSS (Personal Accomplishment, Emotional Exhaustion, and Depersonalization) be predicted using a linear combination of the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered?

According to Maslach and Jackson (1996), identifying variables that are the best predictors of the MBI-HSS can be best assessed by using multiple regression techniques. Therefore, hierarchal multiple regressions (one for each dimension) were used to assess what variables best predict each dimension of the MBI-HSS. Witte and Witte (2004) stated multiple regressions provide more accurate predictions than can be obtained through simple regressions.

Three null hypotheses were evaluated:

Ho3₁: There is no significant relationship between the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered and the Depersonalization dimension of the MBI-HSS.

Ho3₂: There is no significant relationship between the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of

hours worked per week, employment position, teaching responsibilities, and number of teams covered and the Emotional Exhaustion dimension of the MBI-HSS.

Ho3₃: There is no significant relationship between the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment, employment position, teaching responsibilities, and number of teams covered and the Personal Accomplishment dimension of the MBI-HSS.

Research Question #4:

Are there any significant differences in the mean scores in each of the three MBI-HSS dimensions (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) between male and female ATCs? Independent samples t-tests were used to address this question.

Three null hypotheses were evaluated:

Ho4₁: There is no significant difference between male and females scores in the Emotional Exhaustion dimension of the MBI-HSS .

Ho4₂: There is no significant difference between male and females scores in the Depersonalization dimension of the MBI-HSS.

Ho4₃: There is no significant difference between male and female scores in the Personal Accomplishment dimension of the MBI-HSS.

Research Question #5:

What are the biggest sources of stress for ATCs in this population? Subjects were asked to identify what the most common sources of stress are in their particular work setting from a list developed by the researcher. Responses were tallied and described descriptively.

CHAPTER 4

DATA ANALYSIS

Introduction

Burnout is a gradual process that affects individuals employed in many professions. Those employed as certified athletic trainers (ATCs) are no different. Long hours, difficult working conditions, and the routine day-to-day stresses associated with the job can push some ATCs out of the profession prematurely. The purpose of the study was to determine the burnout potential of ATCs employed in the regions of Southwest Virginia and Northeast Tennessee as measured by a modified version of Maslach Burnout Inventory-Human Services Survey.

Demographic Information

Research invitations were e-mailed to 67 ATCs in Northeast Tennessee and Southwest Virginia. The invitations (Appendix C) described the purpose of the study as well as other informed consent issues related to completing the online survey. Fifty surveys were completed, although five responses had to be eliminated from the pool because subjects indicated they were graduate assistants or physical therapists, or entire sections of the instrument were blank, making statistical analysis impossible. The final completion rate of the study was 67% (45/67), which is well above the 60% completion rate that Dillman (2000) stated was acceptable for such a study. Of the 45 respondents, 20 (44.4%) came from Southwest Virginia, while 25 (55.6%) came from Northeast Tennessee. Males accounted for 25 (55.6%) of

the responses, while females accounted for 20 (44.4%) of the responses. The age of respondents ranged from 23 to 54 years.

Most respondents were married, 27 (60.0%), while 17 (37.8%) indicated they were single. One respondent was divorced. Most respondents had no children, with 29 (64.4%) indicating they had no children. The remaining 16 respondents indicated they had either 1 or 2 children.

Participants were employed in a variety of settings. High school ATCs accounted for the single largest group, with 15 (34.1%) respondents employed in this setting. NCAA Division I ATCs followed with 11 (25.0%) completing surveys. Employment setting is illustrated in Table 1 below.

Table 1

Employment Setting of ATCs in Southwest Virginia and Northeast Tennessee

Setting	N	%
High School	15	34.1%
Hybrid (Both Clinic and High School)	2	4.5%
College- NCAA Division I	11	25.0%
College- NCAA Division II	8	18.2%
College- NCAA Division III	4	9.1%
College- NAIA	4	9.1%

Note. One participant did not respond

A majority of the participants in the study indicated they were Head Athletic Trainers- 25, (56.8%). The remaining participants identified their positions as Assistant Athletic Trainers- 16 (36.4%), Program Directors- 2 (4.5%), and Teaching Faculty- 1 (2.3%).

Respondents were almost evenly split between those who had teaching responsibilities- 24 (53.3%) and those that did not- 21 (46.7%). Number of teams covered by the responding AT professional ranged from a low of 1 to a high of 50. Responses regarding the number of hours worked in a normal week were skewed toward the higher ranges. Only one participant reported working less than 30 hours a week, while 23 (51.1%) reported working 51 hours or more. A summary of these responses can be found in Table 2.

Table 2

Number of Hours worked in a normal week

Hours Per Week	N	%
21-30	1	2.2%
31-40	3	6.7%
41-50	18	40.0%
51-60	12	26.7%
61 and Over	11	24.4%

Responses regarding salaries were also varied. While all categories were represented, a majority of the respondents- 34 (76%) indicated their salary was between \$30,001 and \$50,000. A summary of the salary responses can be found in Table 3.

Table 3

<i>Annual Salaries</i>			
Salary Range	N	%	
\$20,000 and under	1	2.2%	
\$20,001-\$30,000	7	15.6%	
\$30,001-\$40,000	20	44.4%	
\$40,001-\$50,000	14	31.1%	
\$50,001-\$60,000	2	4.4%	
\$60,001 and over	1	2.2%	

Analysis of Research Questions

Research Question #1

Are there significant differences in mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) among athletic trainers in Southwest Virginia and Northeast Tennessee when compared with the established mean scores of other allied health professionals?

The hypotheses associated with this research question were:

Ho₁: There is no significant difference in mean score of the Emotional Exhaustion dimension when compared with subgroup norms established by the 3rd Edition of the Maslach Burnout Inventory Manual.

Ho₁₂: There is no significant difference in mean score of the Depersonalization dimension when compared with subgroup norms established by the 3rd Edition of the Maslach Burnout Inventory Manual.

Ho₁₃: There is no significant difference in mean score of the Personal Accomplishment dimension when compared with subgroup norms established by the 3rd Edition of the Maslach Burnout Inventory Manual.

A single-sample t-test was conducted on the Emotional Exhaustion dimension score of the MBI-HSS to evaluate whether the research mean was significantly different from the established mean score of 22.19 (“Medicine” group used for all subsequent calculations). The mean of 21.11 (SD 12.02) was not significantly different from 22.19, $t(44) = .60$, $p = .550$. Therefore, the null hypothesis Ho₁₁ was retained. The 95% confidence interval for the Emotional Exhaustion dimension ranged from 17.5 to 24.72. The effect size of Cohen d was .09 which indicates a small effect. Figure 1 shows the distribution of Emotional Exhaustion scores. The results indicate that ATCs in Southwest Virginia and Northeast Tennessee are exhibiting average levels of Emotional Exhaustion.

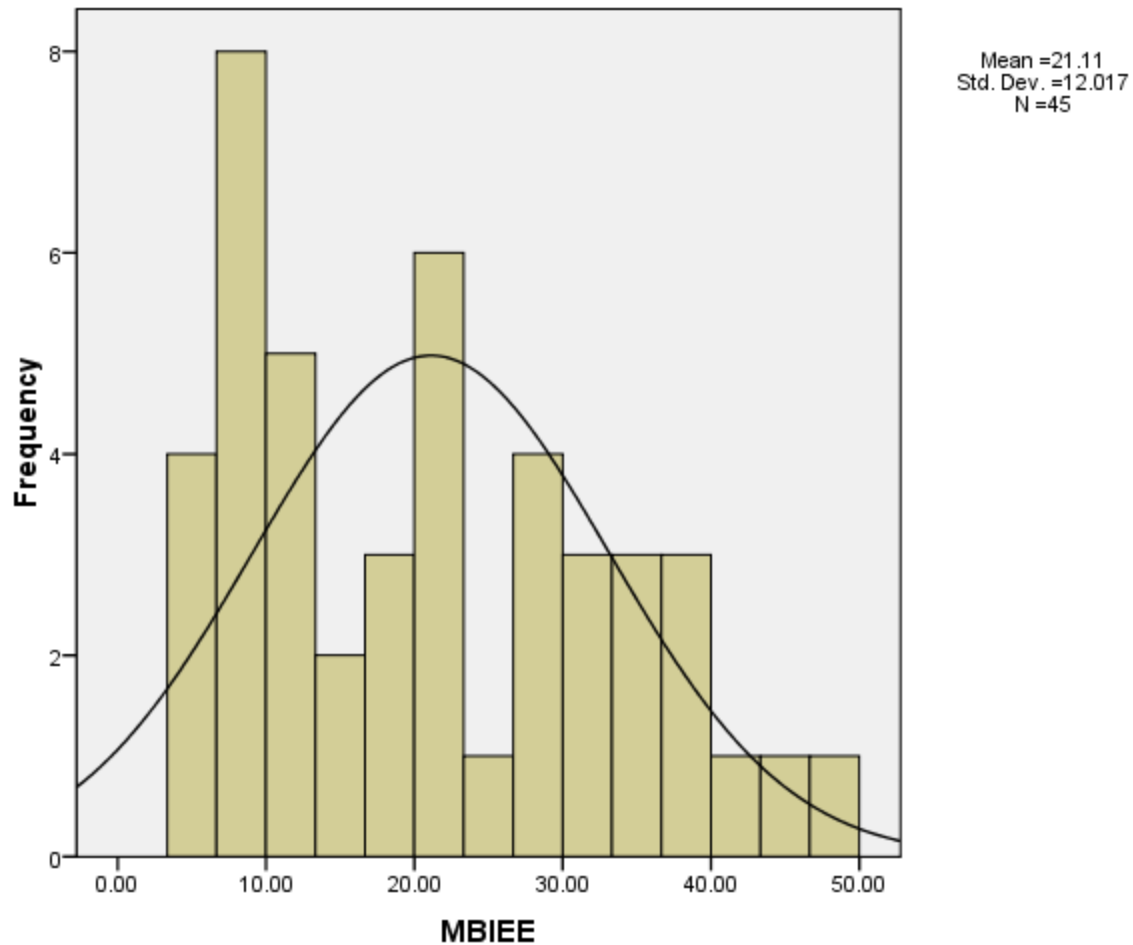


Figure 1. Distribution of MBI-Emotional Exhaustion Scores

A single-sample t-test was conducted on the Depersonalization dimension of the MBI-HSS to evaluate whether the research mean was significantly different from the established mean score of 7.12. The mean of 6.38 (SD 5.90) was not significantly different from 7.12, $t(44) = .84$, $p = .403$. Therefore, the null hypothesis H_{01_2} was retained. The 95% confidence interval for the Depersonalization dimension ranged from 4.61 to 8.15. The effect size of d was .13 indicates a small effect. The results indicate that ATCs in Southwest Virginia and Northeast

Tennessee are experiencing average levels of Depersonalization. Figure 2 shows the distribution of Depersonalization scores.

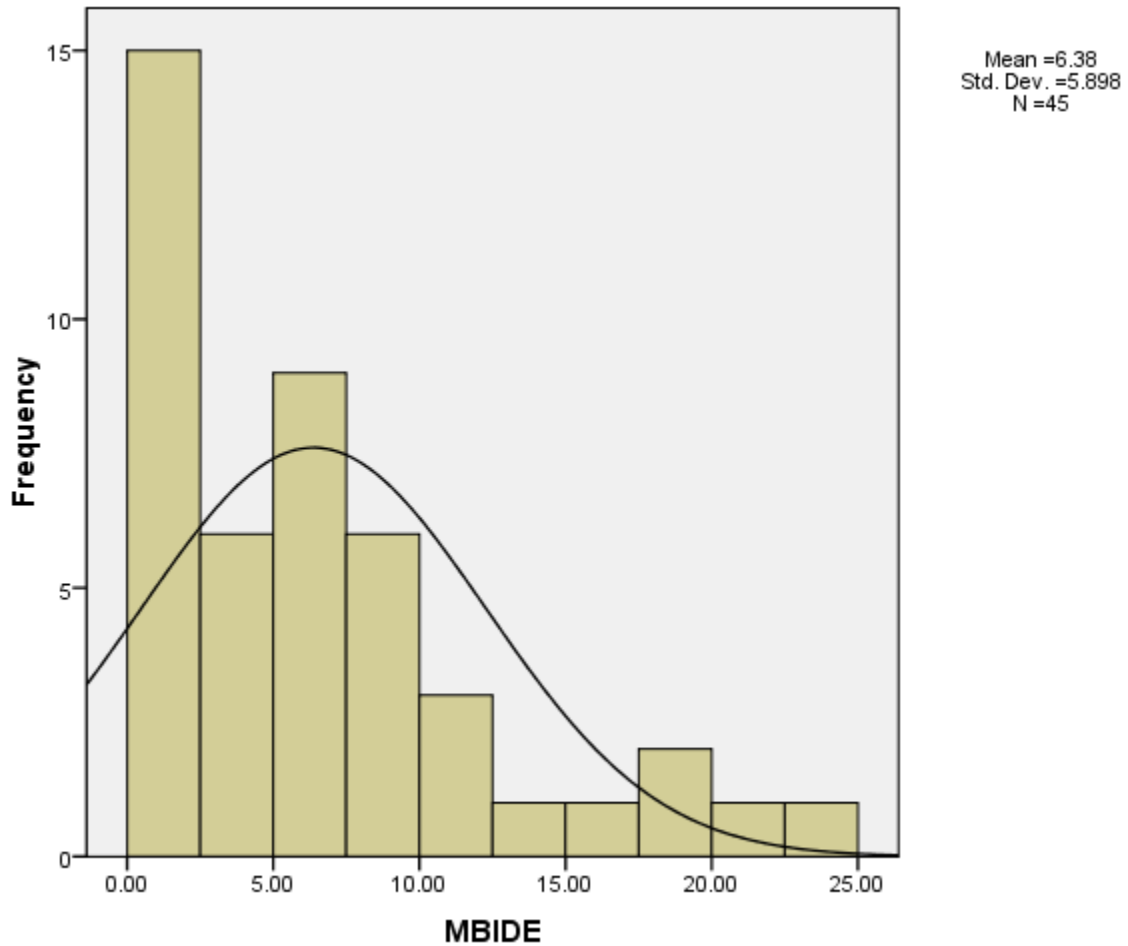


Figure 2. Distribution of MBI-Depersonalization Scores

A single-sample t-test was conducted on the Personal Accomplishment dimension of the MBI-HSS to evaluate whether the research mean was significantly different from the established mean score of 36.53. The research mean of 38.80 (SD 5.12) was significantly different from 36.53, $t(44) = 2.97, p = .005$. Therefore, the null hypothesis H_{013} was rejected.

The 95% confidence interval for the Personal Accomplishment dimension ranged from 37.26 to 40.34. The effect size of d was .44 indicates a medium effect. The results indicate that ATCs in Southwest Virginia and Northeast Tennessee are experiencing high levels of personal accomplishment in their jobs. Figure 3 shows the distribution of Personal Accomplishment scores.

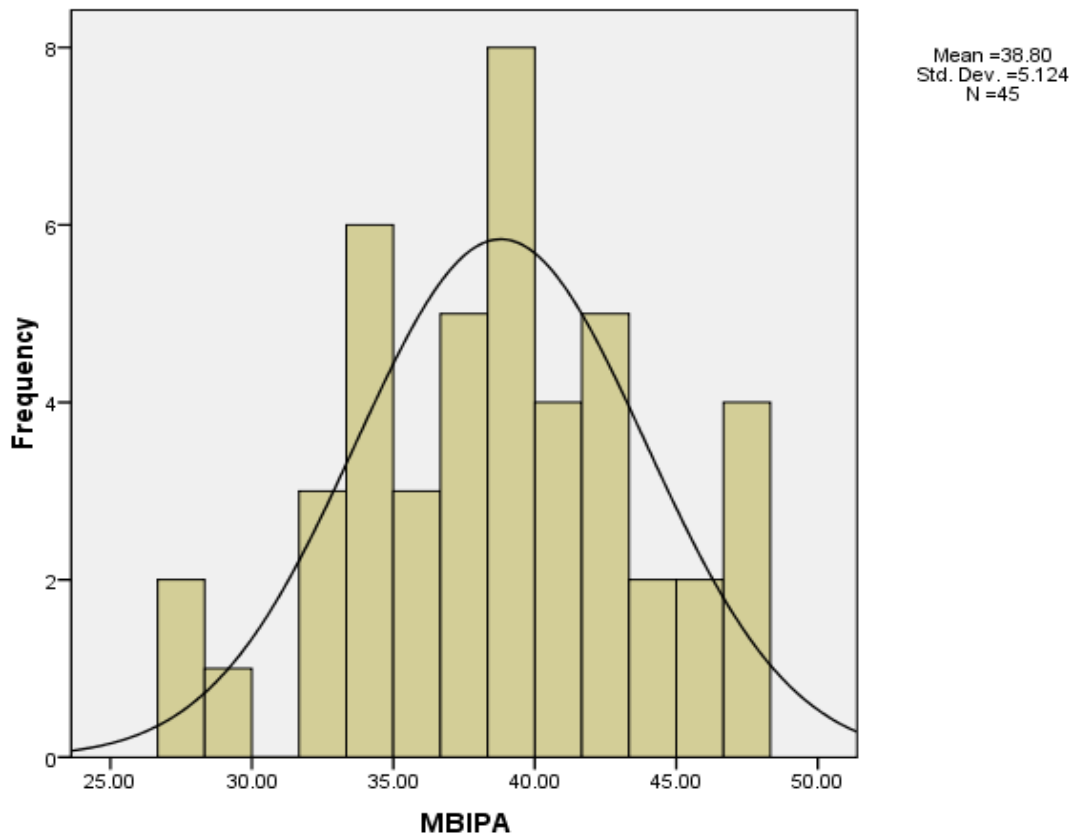


Figure 3. Distribution of MBI-Personal Accomplishment Scores

Research Question #2

Are there significant differences between the mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment)

between those employed in the clinical-high school setting and those employed in the college-university setting?

The hypotheses associated with this research question were:

Ho₂₁: There is no significant difference in the mean scores of the Emotional Exhaustion dimension of the MBI-HSS between those employed in the clinical-high school setting and those employed in the college-university setting.

Ho₂₂: There is no significant difference in the mean scores of the Depersonalization dimension of the MBI-HSS between those employed in the clinical-high school setting and those employed in the college-university setting.

Ho₂₃: There is no significant difference in the mean scores of the Personal Accomplishment dimension of the MBI-HSS between those employed in the clinical-high school setting and those employed in the college-university setting.

To complete statistical analysis, the employment variable was collapsed into two subgroups: Group 1 contained all those working as ATCs in the clinical or high school setting, while Group 2 contained all those working as ATCs in the colleges or university setting.

An independent-samples t-test was conducted to evaluate the hypothesis Ho₂₁ that there is no significant difference in the mean scores of the Emotional Exhaustion dimension of the MBI-HSS between those employed in the clinical-high school setting and those employed in

the college-university setting. The test was not significant, $t(43) = 1.01, p = .317$. Therefore, the null hypothesis was retained. The 95% confidence interval for the difference ranged from -3.67 to 11.08. Figure 4 shows the distribution for the two groups.

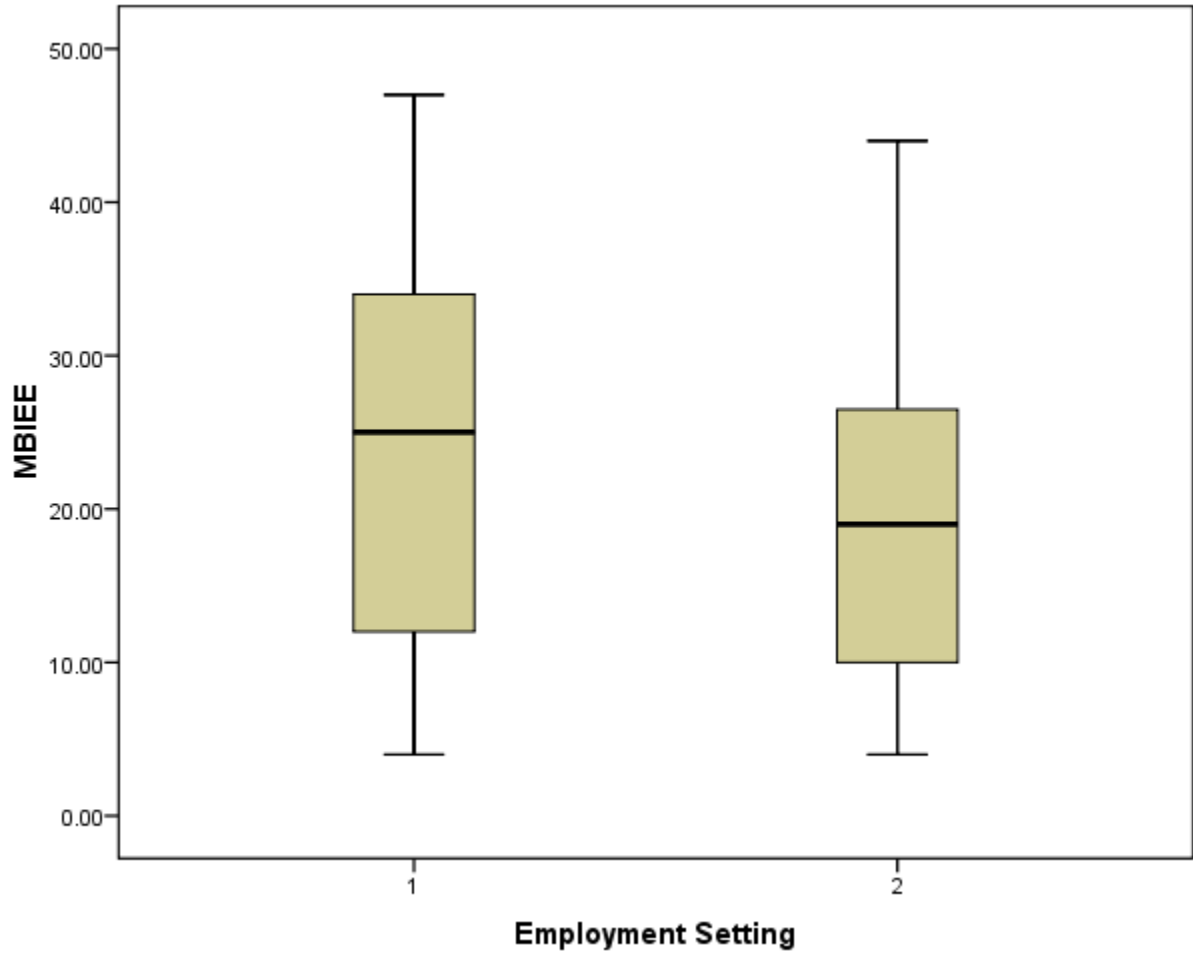


Figure 4. Distributions of Clinical-High School (1) and College-University (2) Emotional Exhaustion Scores

An independent-samples t-test was conducted to evaluate the hypothesis H_{02} that there is no significant difference in the mean scores of the Depersonalization dimension of the MBI-HSS between those employed in the clinical-high school setting and those employed in the

college-university setting. The test was not significant, $t(43) = .76, p = .451$. Therefore, the null hypothesis was retained. The 95% confidence interval for the difference ranged from -5.01 to 2.27. Figure 5 shows the distribution for the two groups.

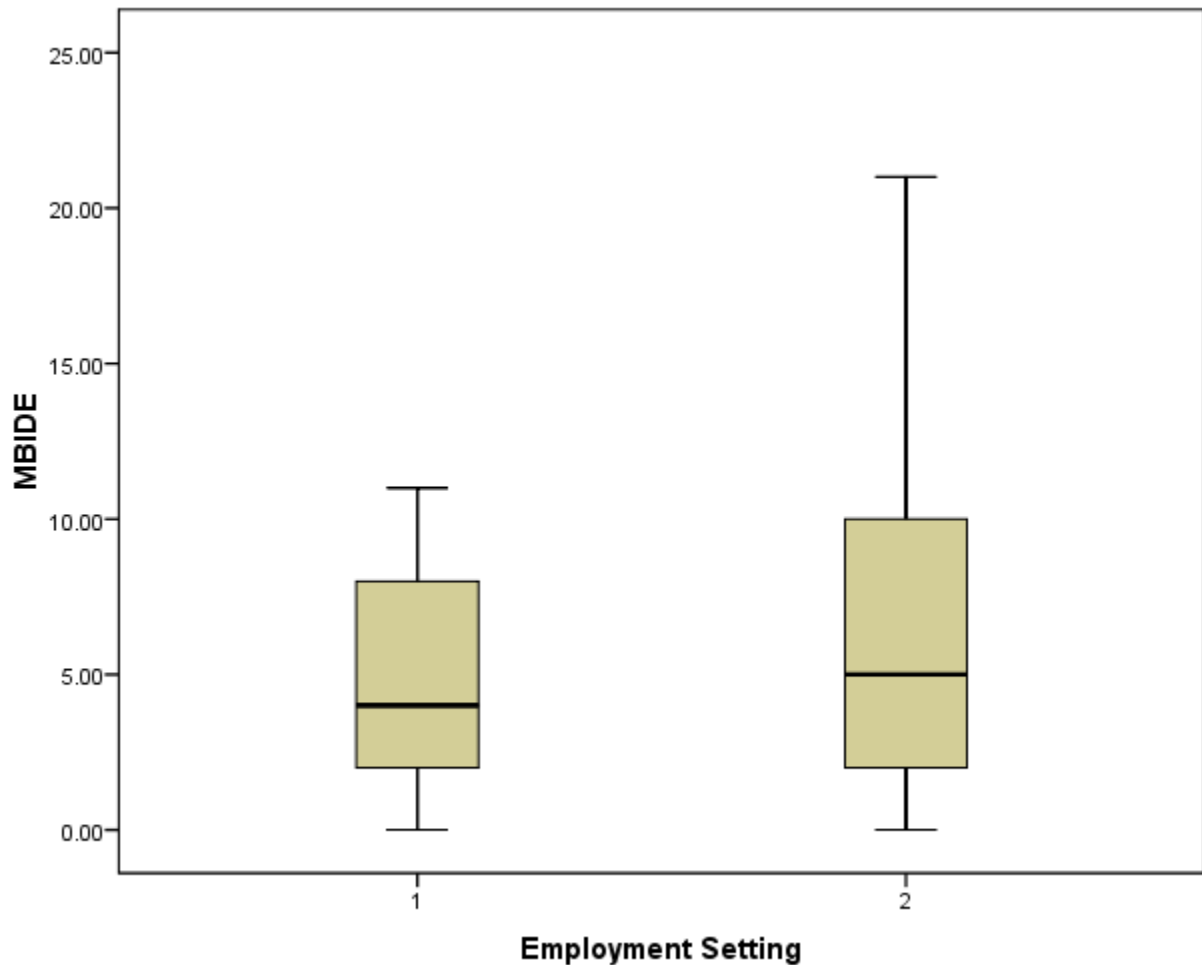


Figure 5. Distributions of Clinical-High School (1) and College-University (2) Depersonalization Scores

An independent-samples t-test was conducted to evaluate the hypothesis H_{023} that there is no significant difference in the mean scores of the Personal Accomplishment dimension of the MBI-HSS between those employed in the clinical-high school setting and those employed

in the college-university setting. The test was not significant, $t(43) = -1.92, p = .061$. Therefore, the null hypothesis was retained. The 95% confidence interval for the difference ranged from -5.96 to .14. Figure 6 shows the distribution for the two groups.

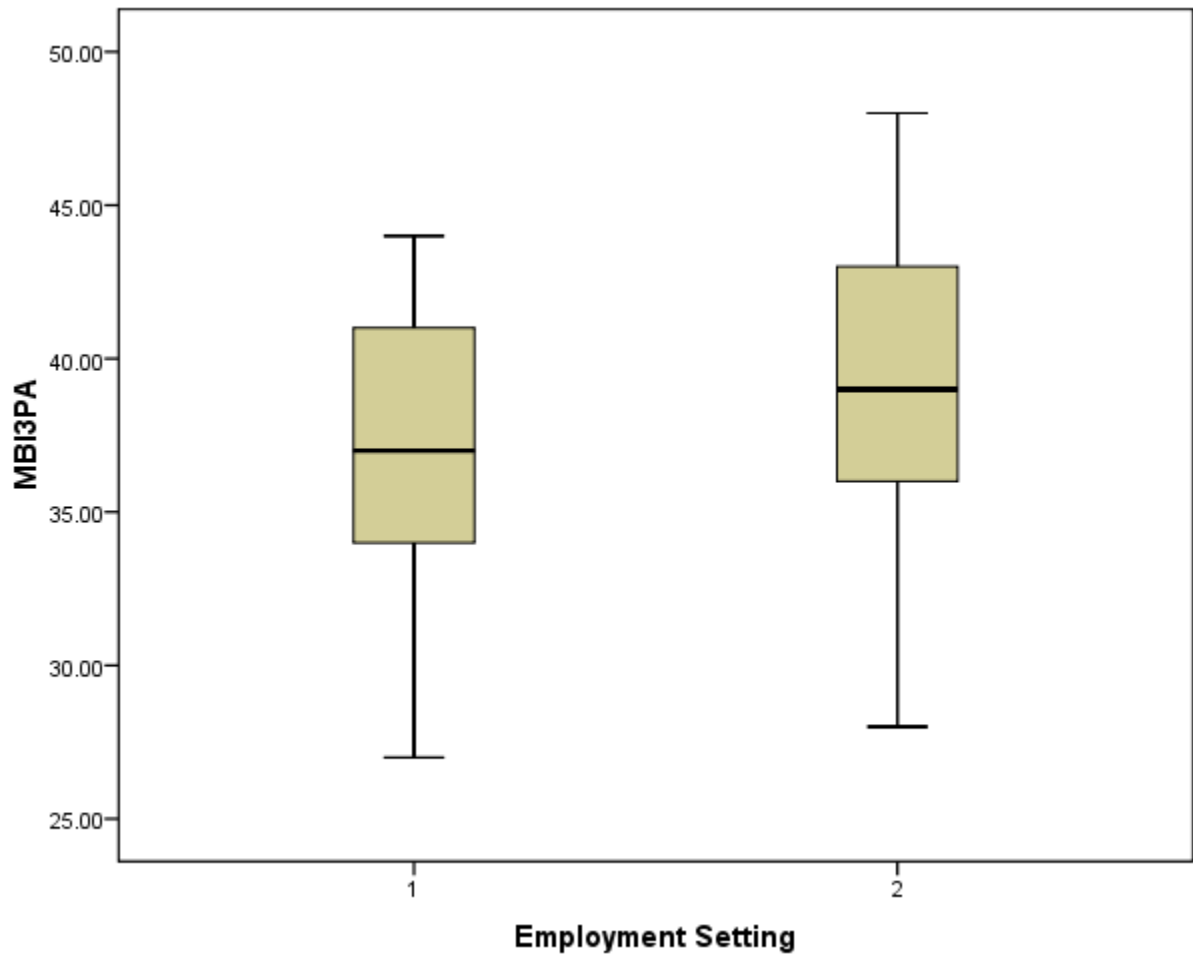


Figure 6. Distributions of Clinical-High School (1) and College-University (2) Personal Accomplishment Scores

Research Question #3

How accurately can scores of each dimension of the MBI-HSS (Personal Accomplishment, Emotional Exhaustion, and Depersonalization) be predicted using a linear

combination of the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered?

Three null hypotheses were evaluated:

Ho3₁: There is no significant relationship between the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered and the Emotional Exhaustion dimension of the MBI-HSS.

Ho3₂: There is no significant relationship between the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered and the Depersonalization dimension of the MBI-HSS.

Ho3₃: There is no significant relationship between the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered and the Personal Accomplishment dimension of the MBI-HSS.

A hierarchical multiple regression analysis was conducted to evaluate how well selected demographic variables predicted Emotional Exhaustion. These predictors were gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered. For statistical analysis in this and subsequent multiple regressions, the predictors of marital status, employment setting, number of hours worked per week, and salary were collapsed (each variable had 2 subcategories. For example, married was either married (1) or not married (2), other options (divorced and separated) were removed due to insufficient numbers.). The linear combination of these variables were not significantly related to Emotional Exhaustion scores, $F(11, 31) = 1.79, p = .099$. Therefore, the null hypothesis H_{03_1} was retained. The sample multiple correlation coefficient was .62, indicating that approximately 39% of the variance of the Emotional Exhaustion Scores can be accounted for by the linear combination of these 11 variables.

In Table 4, the relative strength of each variable is presented. Six of the bivariate correlations were negative, although none of the 11 variables were found to be statistically significant. In addition, in the partial correlation, none of the 11 variables were found to be statistically significant. Gender alone accounted for 13% of the variance in emotional exhaustion, while number of teams covered accounted for another 8% of the variance.

Table 4

The Bivariate and Partial Correlations of the Predictors of Emotional Exhaustion

Predictors	Correlation between each predictor and Emotional Exhaustion	Correlation between each predictor and Emotional Exhaustion controlling for all other predictors
State of Employment	.05	.10
Gender	.36	.30
Age	-.14	-.03
Marital Status	.11	.24
# of Children	.15	.16
Employment Setting	-.19	.02
Position	-.13	.07
Teaching	-.19	-.22
Weekly Hours	-.10	-.07
# of Teams Covered	.29	.32
Salary	-.21	-.08

Table 5 shows the coefficients that indicate the relationship of each individual predictor variables to Emotional Exhaustion. None of the variables were found to be significantly significant.

Table 5

Coefficients of the Simultaneous Linear Regression Between Emotional Exhaustion and Predictor Variables

Factor	Unstandardized Coefficient		Standardized Coefficient		P
	B	S.E.	β	T	
State of Employment	2.189	3.779	.090	.579	.567
Gender	8.976	5.116	.370	1.754	.089
Age	-.048	.305	-.031	-.158	.875
Marital Status	7.186	5.211	.291	1.379	.178
Children	1.835	2.069	.182	.887	.382
Work Setting	.755	5.589	.031	.135	.893
Position	1.932	4.740	.078	.408	.686
Teaching	-6.175	4.834	-.256	-1.277	.211
Weekly Hours	-1.457	3.798	-.060	-.384	.704
Teams Covered	.493	.259	.438	1.901	.067
Salary	-2.131	4.597	-.086	-.464	.646

* p <.05

A hierarchical multiple regression analysis was conducted to evaluate how well selected demographic variables predicted Depersonalization. These predictors were gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered. The linear combination of these variables were not significantly related to Depersonalization scores, $F(11, 31) = .63, p = .793$. Therefore, the null hypothesis H_{03_2} was retained. The sample multiple correlation coefficient was .43, indicating that approximately 18% of the variance of the Depersonalization Scores can be accounted for by the linear combination of these 11 variables.

Seven of the 11 variables were found to be negative, although none were found to be statistically significant. Table 6 illustrates the relative strength of each variable.

Table 6

The Bivariate and Partial Correlations of the Predictors of Depersonalization

Predictors	Correlation between each predictor and Depersonalization	Correlation between each predictor and Depersonalization controlling for all other predictors
State of Employment	-.05	.05
Gender	.15	.04
Age	-.14	-.14
Marital Status	-.03	-.02
# of Children	.09	.20
Employment Setting	.11	.26

Position	-0.08	-0.04
Teaching	-.20	-.13
Weekly Hours	-.00	-.11
# of Teams Covered	.10	.27
Salary	-.01	.11

Table 7 shows the coefficients that indicate the relationship of each individual predictor variable to Depersonalization. None of the variables were found to be statistically significant.

Table 7

Coefficients of the Simultaneous Linear Regression Between Depersonalization and Predictor Variables

Factor	Unstandardized Coefficient		Standardized Coefficient		P
	B	S.E.	β	T	
State of Employment	.557	2.134	.047	.261	.796
Gender	.664	2.889	.056	.230	.820
Age	-.139	.172	-.184	-.807	.426
Marital Status	-.353	2.942	-.029	-.120	.905
Children	1.330	1.168	.270	1.138	.264
Work Setting	4.653	3.155	.386	1.474	.150
Position	-.574	2.676	-.048	-.215	.832

Teaching	-2.056	2.729	-.175	-.753	.457
Weekly Hours	-1.264	2.144	-.107	-.589	.560
Teams Covered	.226	.146	.412	1.545	.133
Salary	1.528	2.595	.127	.589	.560

* p <.05

A hierarchical multiple regression analysis was conducted to evaluate how well selected demographic variables predicted Personal Accomplishment. These predictors were gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered. The linear combination of these variables were not significantly related to Personal Accomplishment scores, $F(11, 31) = .84, p = .606$. Therefore, the null hypothesis H_{03} was retained. The sample multiple correlation coefficient was .48, indicating that approximately 23% of the variance of the Personal Accomplishment Scores can be accounted for by the linear combination of these 11 variables.

None of the 11 variables were found to be statistically significant. Table 8 illustrates the relative strength of each variable.

Table 8

The Bivariate and Partial Correlations of the Predictors of Personal Accomplishment

Predictors	Correlation between each predictor and Personal Accomplishment	Correlation between each predictor and Personal Accomplishment controlling for all other predictors
State of Employment	-.04	.03
Gender	-.22	-.17
Age	.09	.05
Marital Status	.01	-.13
# of Children	.03	.14
Employment Setting	.32	.31
Position	-.00	-.13
Teaching	.00	.13
Weekly Hours	.24	.12
# of Teams Covered	-.17	.00
Salary	.03	-.10

Table 9 shows the coefficients that indicate the relationship of individual predictors to Personal Accomplishment.

Table 9

Coefficients of the Simultaneous Linear Regression Between Personal Accomplishment and Predictor Variables

Factor	Unstandardized Coefficient		Standardized Coefficient		P
	B	S.E.	β	T	
State of Employment	.326	1.801	.031	.181	.858
Gender	-2.282	2.439	-.221	-.936	.357
Age	.040	.146	.061	.277	.784
Marital Status	-1.744	2.484	-.167	-.702	.488
Children	.747	.986	.175	.757	.455
Work Setting	4.862	2.664	.464	1.825	.078
Position	-1.691	2.259	-.161	-.749	.460
Teaching	1.723	2.304	.168	.748	.460
Weekly Hours	1.247	1.810	.122	.689	.496
Teams Covered	.005	.124	.011	.042	.967
Salary	-1.199	2.191	-.114	-.547	.588

* p <.05

Research Question #4

Are there any significant differences in the mean scores in each of the three MBI-HSS dimensions (Emotional Exhaustion, Depersonalization and Personal Accomplishment) between male and female ATCs?

Three null hypotheses were evaluated:

Ho4₁: There is no significant difference between male and female scores in the Emotional Exhaustion dimension of the MBI-HSS.

Ho4₂: There is no significant difference between male and female scores in the Depersonalization dimension of the MBI-HSS.

Ho4₃: There is no significant difference between male and female scores in the Personal Accomplishment dimension of the MBI-HSS.

An independent-samples t-test was conducted to evaluate the hypothesis Ho4₁ that there is no significant difference between male and female scores in the Emotional Exhaustion dimension of the MBI-HSS. The test was significant, $t(43) = 2.66$, $p = .011$. Therefore, the null hypothesis was rejected. Females ($M=26.10$, $SD=10.58$) on average had significantly higher Emotional Exhaustion scores than did males ($M=17.12$, $SD=11.78$). The 95% confidence interval for the differences in means was 15.80 to 2.16. The eta square index indicated that gender accounted for 14% of the variance. Figure 7 shows the distribution of the two genders.

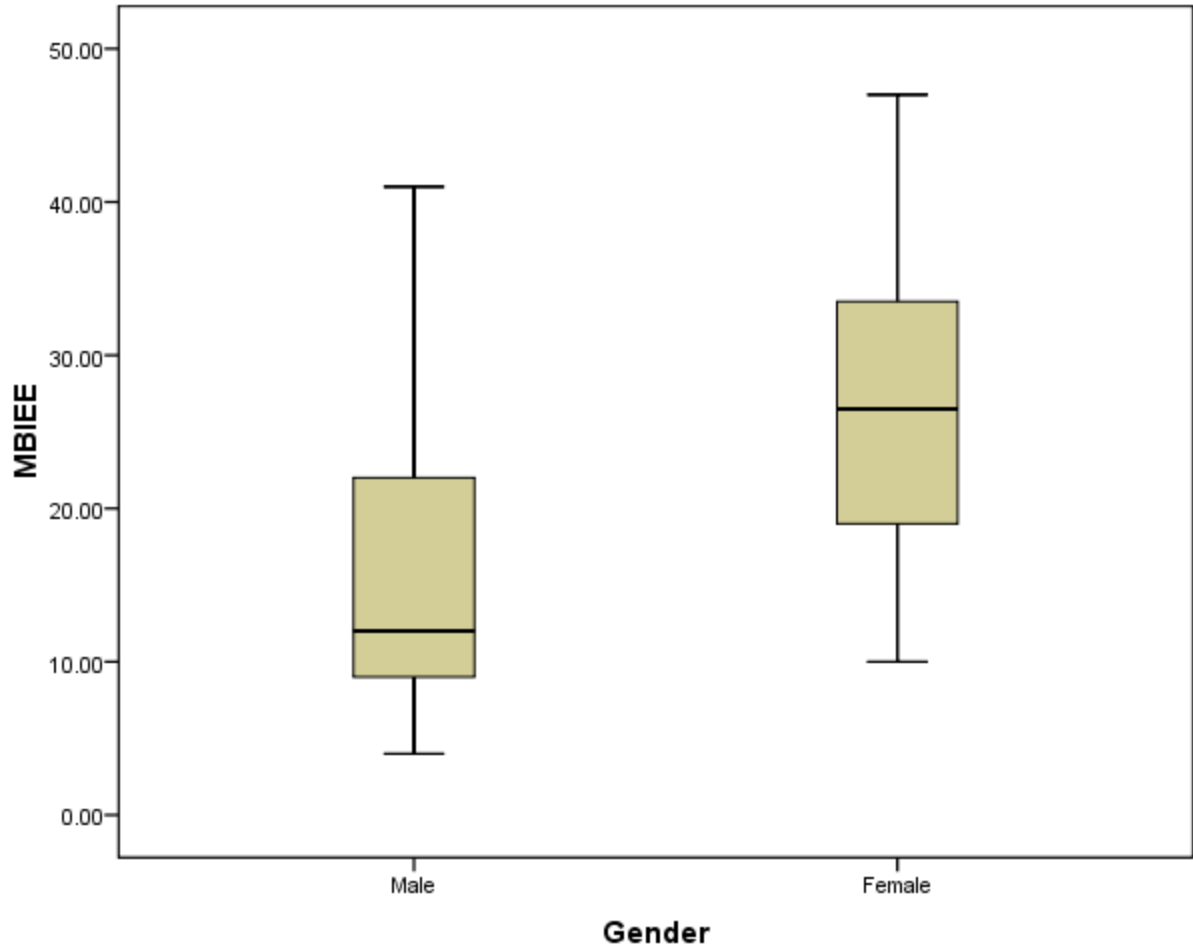


Figure 7. Distribution of MBI-Emotional Exhaustion Scores

An independent-samples t-test was conducted to evaluate the hypothesis Ho₄ that there is no significant difference between male and female scores in the Depersonalization dimension of the MBI-HSS. . The test was not significant, $t(43) = .94$, $p = .354$. Therefore, the null hypothesis was retained . Females ($M=7.30$, $SD=5.53$) Depersonalization scores were not significantly different from males scores ($M=5.64$, $SD=6.19$). The 95% confidence interval for the differences in means was -5.23 to 1.91. Figure 8 shows the distribution of the two genders.

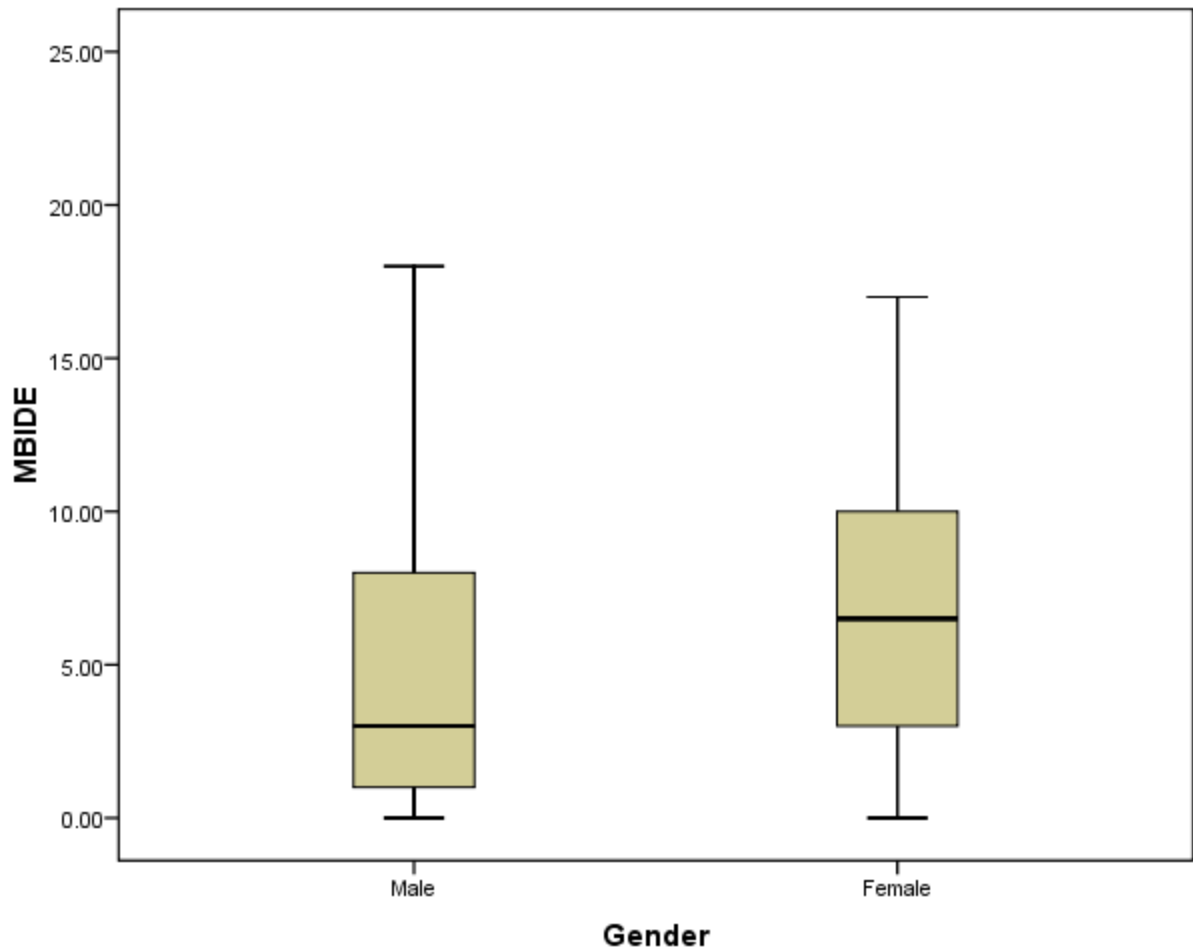


Figure 8. Distribution of Depersonalization Scores

An independent-samples t-test was conducted to evaluate the hypothesis Ho₄ that there is no significant difference between male and female scores in the Personal Accomplishment dimension of the MBI-HSS. The test was not significant, $t(43) = 1.55$, $p = .129$. Therefore, the null hypothesis was retained. Male ($M = 39.84$, $SD = 5.17$) Personal Accomplishment scores were not significantly different from females scores ($M = 37.50$, $SD = 4.88$). The 95% confidence interval for the differences in means was -0.71 to 5.39 . Figure 9 shows the distribution of the two genders.

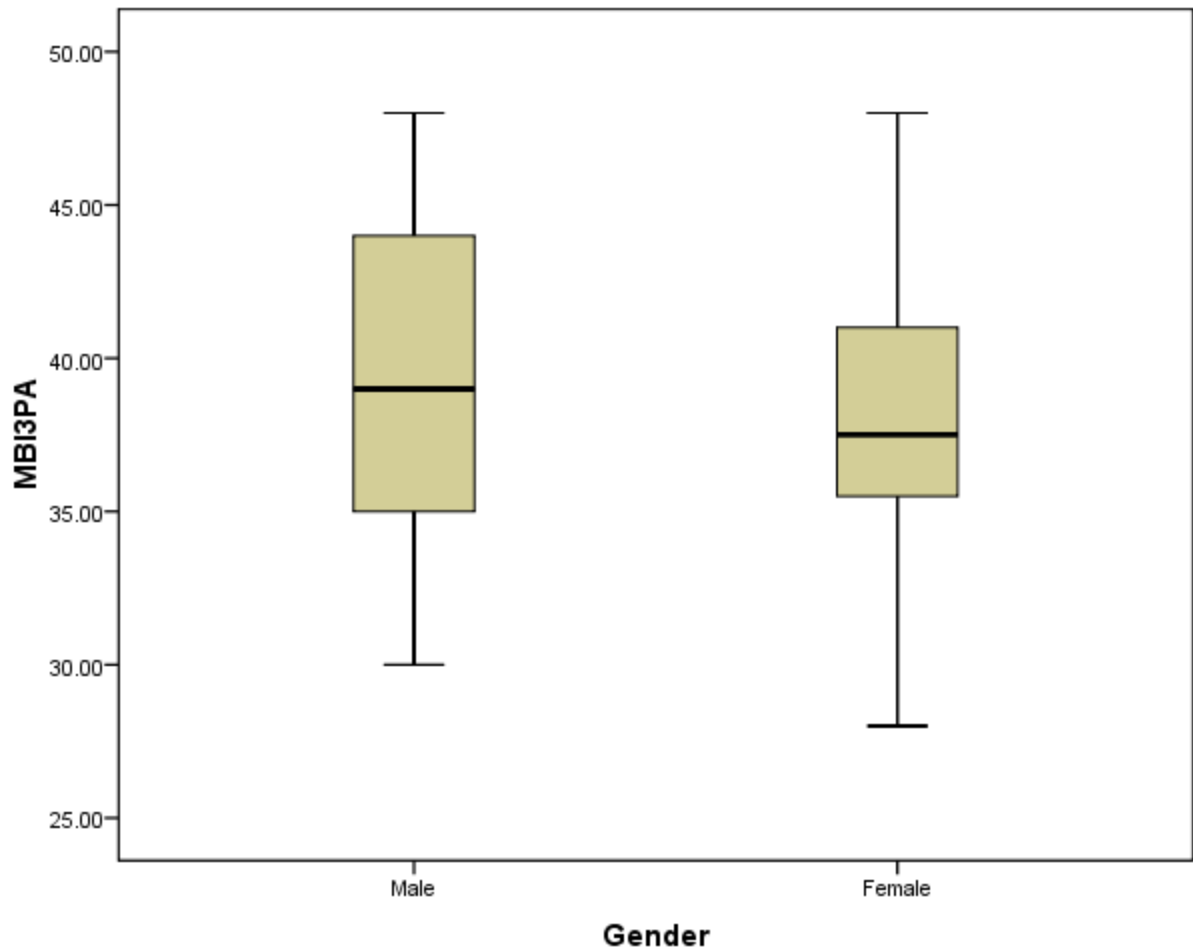


Figure 9. Distribution of Personal Accomplishment Scores.

Research Question #5

What are the biggest sources of stress for ATCs in this population?

Many of the same factors were identified by participants as being significant sources of stress. The factor identified most often was that of working too many hours. This factor was cited by 33 of the 45 (73.3%) respondents as being in the top five sources of their stress, with 20 of these respondents ranking this factor as the most stressful or 2nd most stressful. Salary was a close second with 30 respondents (66.7%) ranking this factor in their top five. Sixteen of

the 30 respondents ranked this factor as the most stressful or 2nd most stressful factor. A summary of the factors that were most often ranked are found in Table 10 below.

Table 10
Common Sources of Stress

Cause of Stress	Number of Times Identified	Overall %	Number of Times Identified as the Most Stressful Factor
Working Too Many Hours	33	73.3	11
Salary	30	66.7	8
Coaches	27	60.0	4
Family Conflicts	22	48.9	5
Lack of Physical Resources	18	40.0	2
Lack of Respect for AT			
Profession	16	35.6	1
Athletes or Students	15	33.3	6
Lack of Staff	13	28.9	2
Other AT Staff	11	24.4	4
Unrealistic Expectations			
From Colleges	10	22.2	1

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR PRACTICE AND FURTHER RESEARCH

Introduction

While the phenomenon of burnout has been examined extensively in many professions, research that focuses primarily of the profession of athletic training has been sporadic. Prior to this study, no identified research dealt specifically with certified athletic trainers working in the regions of Southwest Virginia and Northeast Tennessee. Therefore, the purposes of the study were:

1. To determine the burnout potential for certified athletic trainers employed in the region of Southwest Virginia and Northeast Tennessee as measured by a modified version of the MBI-HSS.
2. To determine if employment setting played a significant role in burnout potential.
3. To identify which personal and professional variables are most heavily correlated with each dimension of the MBI-HSS in this population.
4. To determine if any correlates exist based on gender in the process of burnout.
5. To identify the most common source of stress for ATCs in the research population.

Maslach and Jackson (1996) view professional burnout in the following ways:

1. High Potential for Burnout is illustrated by high scores on the Emotional Exhaustion and Depersonalization dimensions and low scores in the Personal

Accomplishment dimension of the Maslach Burnout Inventory-Human Services Survey.

2. Average Potential for Burnout is illustrated by average scores in all three dimension of the Maslach Burnout Inventory-Human Services Survey.
3. Low Potential for Burnout is illustrated by low scores on the Emotional Exhaustion and Depersonalization dimensions and high scores in the Personal Accomplishment dimension of the Maslach Burnout Inventory-Human Services Survey.

Summary

Research invitations were emailed to 67 ATCs in Northeast Tennessee and Southwest Virginia. Fifty surveys were completed, although five responses had to be eliminated from the pool because subjects indicated they were graduate assistants or physical therapists, or entire sections of the instrument were blank, making statistical analysis impossible. The final completion rate of the study was 67%. Subjects who voluntarily decided to participate in the study were directed to a secure online site where they completed a three-part survey. Of the 45 respondents, 20 (44.4%) came from Southwest Virginia, while 25 (55.6%) came from Northeast Tennessee. Males accounted for 25 (55.6%) of the responses, while females accounted for 20 (44.4%) of the responses. The age of respondents ranged from a low of 23 to a high of 54.

Statistical analysis of the surveys revealed the following:

1. ATCs in Northeast Tennessee and Southwest Virginia experienced average levels of Emotional Exhaustion ($p=.55$) and Depersonalization ($p=.40$), but high levels of Personal Accomplishment ($p=.005$).
2. There was no statistically significant differences found in Emotional Exhaustion ($p=.31$), Depersonalization ($p=.45$) and Personal Accomplishment ($p=.06$) between those ATCs working in the clinical-high school setting and those working in the college-university setting.
3. Females experienced Emotional Exhaustion ($p=.01$) at a statistical significant level that was higher than males.
4. The linear combination of the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, employment position, teaching responsibilities, and number of teams covered produced the following:
 - a. The multiple correlation coefficient for Emotional Exhaustion was .62 with approximately 39% of the variance was explained by the aforementioned predictor variables ($p=.09$).
 - b. The multiple correlation coefficient for Depersonalization was .43 with approximately 18% of the variance was explained by the aforementioned predictor variables ($p=.79$).
 - c. The multiple correlation coefficient for Personal Accomplishment was .48 with approximately 23% of the variance was explained by the aforementioned predictor variables ($p=.60$).

5. The top five sources of stress for ATCs in this demographic were too many hours, salary, coaches, family conflicts, and lack of resources.

Discussion of Research Questions

Question #1:

Are there significant differences in mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) among certified athletic trainers in Southwest Virginia and Northeast Tennessee when compared to the established mean scores of other allied health professionals?

Results of the study indicated that levels of Emotional Exhaustion and Depersonalization for ATCs in Southwest Virginia and Northeast were not significantly different from established mean scores for other allied professions. This supports similar findings by Baker (2004), Christensen (1997), Kauk (1990), Marcus (1993), and Nierman (2007), all of which found burnout levels to be low among athletic trainers. However, in this study a significantly higher difference was found in the Personal Accomplishment dimension when compared to other allied health professions. Marcus also reported significantly higher Personal Accomplishment scores. After further evaluation, this difference seems to be attributed primarily to gender in the study. When male and female data were sorted, it was found that the female Personal Accomplishment mean score was not significantly different from other allied health professionals when calculated independently. The Personal Accomplishment mean score of males on the other hand, were found to be significantly different (Interestingly, male and females Personal Accomplishment scores were not found to be significant different when

analyzed in Question 4). This finding seems to suggest that male scores increased the collective mean for the overall group. At least in this population, male ATCs believe they are accomplishing something worthwhile in their work.

Question #2:

Are there significant differences between the mean scores of the three dimensions of the MBI-HSS (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) between those employed in the clinical-high school setting than those working in the college-university setting?

Results of the independent samples t-test found no significant differences in any of the three MBI-HSS dimensions between the clinical-high school setting and the college-university setting. These findings are both supported and contradicted in previous research. Capel (1986) found that collegiate athletic trainers experienced burnout at higher rates than did the high school athletic trainer. However, Christensen (1997), Kania (2005), Nierman (2007), and Tanaka (2001), found work setting (high school or college) produced no difference in burnout potential.

Of the 45 participants in the study, 17 ATCs worked in high schools in some capacity, 11 worked in NCAA Division I institutions, eight worked in NCAA Division II institutions, and eight worked in NCAA Division III or NAIA institutions. The study had a return rate of 67%, which according to Dillman (2000) is an acceptable rate for an online study. However, Dillman (2000) does recommend that a return rate of 80% should be the goal. While an 80% return (translates to nine additional participants) may have produced different significance values (p-values), the previously mentioned research does support the findings of this particular study. With the

exception of the Personal Accomplishment Dimension ($p=.06$), it would take high scores in the Emotional Exhaustion ($p=.32$) and Depersonalization ($p=.45$) dimensions to push significance values in each employment setting below the .05 level.

Question #3:

How accurately can scores of each dimension of the MBI-HSS (Personal Accomplishment, Emotional Exhaustion, and Depersonalization) be predicted using a linear combination of the personal and professional variables of gender, age, marital status, number of children, employment setting, state of employment, annual salary, number of hours worked per week, teaching responsibilities, employment position, and number of teams covered?

While no statistical significance was found when using all of the aforementioned predictor variables in any of the regression models, this would not be the case if some of the variables were eliminated from the calculation, specifically in the Emotional Exhaustion dimension. When the variables of state of employment and weekly hours were removed from the analysis, the regression model was found to be statistically significant, $F(9, 33) = 2.24$, $p=.044$. This finding is somewhat confusing because one would usually associate long working hours as one of the primary precursors to Emotional Exhaustion. If individuals work all the time, it's logical to deduct that they would feel exhausted from their jobs. What makes the removal of this variable even more confusing was the fact that long working hours was identified most often as the number one cause of stress among the participants. In the research population, although working long hours is stressful, it does not necessarily lead to exhaustion in one's job. This could be because most athletic trainers know from the very

beginning that the job often requires extended working hours that can make for very long days. Interestingly, Baker (2004) found a significant relationship between number of hours worked and the Personal Accomplishment dimension not the Emotional Exhaustion dimension.

Question #4:

Are there any significant differences in the mean scores in each of the three MBI-HSS dimensions (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) between male and female ATCs?

Results of the study found no significant difference in the Personal Accomplishment and Depersonalization dimensions but did find significance differences in the Emotional Exhaustion dimension. This finding is supported by previous research from Caccese and Mayerberg (1984) and Pastore and Judd (1993). Although the study did not focus on ATCs, Pastore and Judd found significant differences in the Emotional Exhaustion subscale between male and female coaches. Similarly, Caccese and Mayerberg found female coaches reported significantly higher levels of Emotional Exhaustion and significantly lower levels of personal accomplishment than male coaches. Contrastly, Nierman (2007) and Tanaka (2001) found gender had no effect on any of the three dimensions of the MBI-HSS.

The significant finding in the Emotional Exhaustion dimension is not entirely unexpected. As discussed earlier in Chapter 2, Maslach and Jackson (1985) found that females in general tend to focus more on caring and nurturing their patients when compared to their male counterparts. This finding seems to suggest that because females give more of

themselves emotionally, they could be more prone to higher scores in the Emotional Exhaustion dimension. This assumption has found support in previous research (Gold, 1985; Peltzer, 2003).

However, just because females have a tendency to score high in the Emotional Exhaustion dimension does not necessarily make them more likely to experience burnout. Remember that burnout involves three distinct dimensions: Emotional Exhaustion, Depersonalization, and Personal Accomplishment (as defined by Maslach & Jackson, 1996). High scores in one, or even all, categories do not mean an individual is destined to burnout just that these individuals are at a higher risk to do so.

Question #5:

What are the greatest sources of stress for ATCs in this population?

As mentioned in Chapter 4, the top sources of stress for the entire population were working too many hours (33), salary (30), coaches (27), family conflict (22), and lack of physical resources (18). However, when data were sorted by gender or employment setting, some notable variations were discovered.

The top five sources of stress for female ATCs were: coaches (16), salary (12), working too many hours (11), lack of respect (9), and lack of physical resources (9). The identification of “coaches” and “lack of respect” as two of the top five sources of stress is not entirely unexpected. Shingles (2001) found that females ATCs often do feel pressure from male coaches. Females ATCs often reported to being “disempowered” because of their gender and do not get the respect that is given to their male counterparts. Even in the early 1980s, Gieck

(1984) was discussing the difficulties that female ATCs often encounter while working in a predominately male dominated field. Findings from this study seem to support these concerns.

Of some note of interest, the factor of “family conflicts” was not identified as one of the top sources of stress for female ATCs. It was however identified as the second top source of stress for male ATCs. This finding is supported by Dingle (2002) who also found that males often were caused significant stress from the lack of time they had with their families.

Mazerolle (2005) and Manigold and Hunt (2007) described how it is usually the female ATCs who are the ones who struggle juggling the role of parent, spouse, and ATC. Female participants in the study seem to have found a successful balance. However, when data were examined further a different explanation is discovered. Of the 20 females who participated in the study, only seven (35%) were married, and only three of the seven had children. All three of these respondents ranked “family conflicts” as the 2nd most common source of stress.

Males had similar stress rankings to females, although not identical. The top sources of stress for males were too many hours (22), family conflicts (19), salary (18), coaches (11), and lack of resources (9) respectively. These findings are supported from Mazerolle (2005) who found DI football ATCs also identified long hours and travel contributed directly to increased feelings of burnout.

Data were also sorted between the high school-clinical ATCs and the college-university ATCs. Among the high school-clinical ATCs the leading causes of stress were working too many hours (13), salary (12), coaches (9), lack of staff (9), lack of respect (9), and lack of resources (9). The top five sources of stress for the college-university ATCs were very similar with the top three being the same as the high school-clinical ATC. The top sources of stress were too many

hours (20), salary and coaches tied for second with 18 responses, family conflicts (15), and other AT staff (9) rounded. Dingle (2002) also found college ATCs were caused considerable stress by coaches.

Conclusions

The burnout potential for certified athletic trainers working in the regions of Southwest Virginia and Northeast Tennessee as measured by a modified version of the MBI-HSS is similar to other allied health professions. Not a single respondent could be placed in the “High Potential for Burnout” subgroup as defined by Maslach and Jackson (1996). While many had high scores in the Emotional Exhaustion and Depersonalization dimensions, they also had high scores in the Personal Accomplishment dimension, possibly buffering the stresses of the job. So while many participants report to be emotionally exhausted, they also feel that their work mattered and was making a real difference for their athletes. This seemed to be the case regardless of work setting or gender, although females did score significantly higher in the Emotional Exhaustion dimension than did males. While most of the participants identified many of the same variables as significant source of stress, the female ATC did rate coaches and lack of respect higher than did males. As has been documented in other studies, females still feel disrespected working in an arena that for many years was dominated by males.

Summary

Certified athletic trainers (ATCs) play vital roles in caring for those who chose to be physically active. As unique members of the allied health field, these professionals provide

specialized care that is essential to the overall health and well being of athletes and nonathletes alike. The purpose of this study was to examine the burnout potential of those employed as ATCs in the regions of Southwest Virginia and Northeast Tennessee. The study also examined what effect work setting, as well as, gender played in an individual's burnout potential. Various demographic and personal variables were also examined to determine their predictive value for each dimension of the MBI-HSS. Furthermore, subjects were also asked about the top sources of stress in their jobs.

Results of the study found that ATCs in these regions have average scores in the dimensions of Emotional Exhaustion and Depersonalization, and high scores in the Personal Accomplishment dimension. Results also found that work setting and gender had little effect on burnout potential, with the exception of the Emotional Exhaustion dimension, where females scored at significantly higher levels than males. No statistical significance was found between the demographic and personal variables and any dimension of the MBI-HSS. The top sources of stress for this population were identified as too many hours, salary, coaches, family conflicts, and lack of physical resources.

Recommendations for Practice

The following recommendations were generated from this research study:

1. There needs to be open dialog within organizations that define the roles and responsibilities of athletic trainers, especially when females are involved.

Female ATCs in the study identified coaches and lack of respect as two major sources of stress. It may be beneficial for those in leadership or administrative positions to discuss the expectations of each position within the department in an open venue. If all parties involved (both male and female) understand what role they play in the overall mission of the organization, they are more likely to understand their own importance in achieving these goals and, perhaps more importantly, understand the importance of others in achieving these same goals.

2. Administrators should consider various methods to identify an employee's potential for burnout.

While no version of the MBI is intended to be a diagnostic tool, it may be useful for administrators to use it for early intervention. If administration is made aware of the potential for burnout before it is too late, the likelihood of dealing with that problem successfully increases. It is note-worthy to mention that while ATCs in the study did not report high numbers in terms of burnout potential, if other burnout measures were used, especially that did not include Personal Accomplishment as part of the burnout equation, much higher numbers would have been found.

3. Hire additional ATCs

Regardless of gender and work setting, the top source of stress was number of working hours. It has been established that while stress and burnout are not the same phenomena, they are highly correlated. The most effective way to address this factor is to hire more ATCs. When more ATCs are in place to share the responsibilities, long working hours become less of a concern.

Recommendations for Future Research

1. Repeat this study during a different semester.

This study was completed during the fall sports season. Fall is usually the most work-intensive time of year for most athletic trainers, especially if the school offers football. Not only would repeating the study during the spring season possibly produce different results, but the participation rate may be improved. Some potential participants may have simply been too busy to complete surveys.

2. Repeat this study using a different burnout measure, more specifically the Athletic Training Burnout Inventory (ATBI).

The ATBI was discussed briefly in Chapter 2. While the MBI-HSS has been, and continues to be, the inventory of choice when examining burnout in most professions, the ATBI may eventually prove to be a more applicable to athletic trainers, specifically because it is intended to measure burnout in athletic trainers, and athletic trainers only. Comparing results between the MBI-HSS and the ATBI could be useful in establishing the validity of the ATBI.

3. Complete more studies that focus on the female ATC.

Results from this study, as well previous research, demonstrate that females experience higher levels of emotional exhaustion than do males. Mechanisms may need to be put in place that helps the female ATC deal with the stress of the profession.

4. Follow-up the study with a qualitative interview.

Interviews could yield details that simply could not be found in a solely quantitative study.

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APPENDICES

APPENDIX A

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Dennis Cobler
Emory and Henry College
Athletic Dept.
12226 Maple Street
Glade Spring, VA 24340

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By _____
Dennis Cobler

Date _____

Dennis Cobler

Emory and Henry College Athletic Dept.

1226 Maple Street

Glade Spring, VA 24340

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By _____

Authorized Representative

Date _____

I AGREE TO THE ABOVE CONDITIONS:

By _____

Dennis Cobler

Date _____

APPENDIX B

Invitation to Participate

Invitation to Participate

You are invited to participate in a research study being conducted by Dennis Cobler, a doctorate student at East Tennessee State University. The study will involve completing an on-line survey that should only take 10-15 minutes of your time. It is important you read and understand the following information as it addresses the informed consent issues related to the study. Please note that all of your responses will be completely anonymous and no identifying information will be collected.

The purpose of the study will be to examine job-related attitudes associated with working as an athletic trainer (ATC) in the areas of Southwest Virginia and Northeast Tennessee. ATC's employed in these predominately rural regions face challenges and stresses that may not be present in larger metropolitan communities. For the purpose of this research project, Southwest Virginia will be defined as the counties of Giles, Montgomery, Floyd, Carroll, Pulaski, Bland, Wythe, Grayson, Smyth, Tazewell, Buchanan, Russell, Washington, Scott, Dickenson, Wise and Lee, as well as the independent cities of Galax, Bristol, Norton and Radford. Northeast Tennessee will be defined as the counties of Claiborne, Grainger, Jefferson, Cocke, Greene, Hamblen, Hancock, Hawkins, Unicoi, Washington, Sullivan, Carter and Johnson.

Those that choose to participate will complete an on-line survey. The survey contains three sections: a demographics section, an athletic training survey, and a stress ranking. Again, participation is completely anonymous and the collected data will have no identifiers. After the submission deadline has passed (three weeks from the date invitation was sent), data will be downloaded and entered into SPSS for statistical calculations. Results of the research project will be used for scholarly purposes only.

There are no foreseeable risks or discomforts associated with participation in this research project. Benefits of the project include contributing to, what up this point, has been a lack of knowledge regarding ATC's employed in these regions. No previous research could be found that primarily focused on ATC's working in Southwest Virginia and Northeast Tennessee, so this would be the first.

If you have any questions or concerns about this research project, please contact:

Primary Researcher
Dennis Cobler, MA, LAT, ATC
Office: (276) 944-6589
E-Mail: dccobler@ehc.edu

or

Dissertation Chair
Dr. Catherine Glascock
Office: (423) 439-4430
E-Mail: glascock@etsu.edu

By clicking on the link below, I acknowledge the following:

1. I am 18 years of age or older.
2. I work in the areas of Southwest Virginia or Northeast Tennessee as defined above.
3. I am currently an active athletic trainer (not a student or retired).
4. Athletic training is my primary profession.
5. I have read and understand this informed consent document.
6. I voluntarily agree to participate in the research study.

To participate in the research project, click the link below:

http://www.surveymonkey.com/s.aspx?sm=lv8fcMSv93yetSwaBojiRQ_3d_3d

APPENDIX C

Survey Instrument

1. Athletic Training-Human Services Survey

Thank you for choosing to participate in this research study. I appreciate your willingness to help. This will be a relatively short survey BUT it is important you read all questions thoroughly before answering. The survey should only take 10-15 minutes of your time. Due to the limited nature of the research population, everyone's input is extremely important. Click below to begin the survey.

2. Demographic Information

Please select only one response for each of the following 11 questions.

1. In which state are you currently employed?

- Virginia
- Tennessee

2. What is your gender?

- Male
- Female

3. What is your current age?

4. What is your current marital status?

- Single
- Married
- Separated
- Divorced

5. How many children do you have (If none, enter 0)

6. In which setting are you employed?

- Clinic
- High School
- Hybrid (Both Clinic and High School)
- College-NCAA Division I
- College-NCAA Division II
- College-NCAA Division III
- College-NCAA Division III
- College-NAIA
- Professional Team
- Industrial/Health and Fitness Club

Other (please specify)

7.

7.

- Program Director
- Head Athletic Trainer
- Assistant Athletic Trainer
- Teaching Faculty Only

Other (please specify)

8. Do you have teaching responsibilities?

- Yes
- No

9. How many hours do you work in a normal week?

- 20 or under
- 21-30
- 31-40
- 41-50
- 51-60
- 61 and over

10. How many teams do you personally provide coverage for?

11. What is your annual salary?

- \$20,000 and under
- \$20,001 - \$30,000
- \$30,001 - \$40,000
- \$40,001 - \$50,000
- \$50,001 - \$60,000
- \$60,001 and over

3. Athletic Training Survey

***Due to Copyright restrictions, Section Three of the survey instrument cannot be shown. However, the following sample is provided by CPP, Inc. to illustrate how the survey is administered and scored. ***

SAMPLE ITEMS FOR THE
MASLACH BURNOUT INVENTORY

"Human Services Survey"

by Christina Maslach and Susan E. Jackson

Directions: The purpose of this survey is to discover how various persons in the human services or helping professions view their jobs and the people with whom they work closely. Because persons in a wide variety of occupations will answer this survey, it uses the term "recipients" to refer to the people for whom you provide your service, care, treatment, or instruction. When you answer this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, write a "0" (zero) before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

How Often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

I. Depersonalization

5. I feel I treat some recipients as if they were impersonal objects.

II. Personal Accomplishment

9. I feel I'm positively influencing other people's lives through my work.

III. Emotional Exhaustion

20. I feel like I'm at the end of my rope.

From the *Maslach Burnout Inventory - Human Services Survey* by Christina Maslach and Susan E. Jackson. Copyright 1988 by CPP, Inc. All rights reserved. Further reproduction is prohibited without the Publisher's consent.

4. Sources of Stress

Please rank the top five sources of stress in your job.

	Most Stressful	2 nd most stressful	3 rd most stressful	4 th most stressful	5 th most stressful
Working too many hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Conflicts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Athletes/Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other AT Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Principal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Athletic Director	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School President	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
College/University Dean	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Division/Department Chair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Salary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of Physical Resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Unrealistic Expectations from Collegians	0	0	0	0	0
Lack of Staff	0	0	0	0	0
Too Many Teaching Responsibilities	0	0	0	0	0
Duties of Position Not Clear	0	0	0	0	0
No Possibility of Career Advancement	0	0	0	0	0
Lack of Benefits	0	0	0	0	0
Conflicts with Other Departments on Campus	0	0	0	0	0
Lack of Respect for AT Profession	0	0	0	0	0
Monotony of Job	0	0	0	0	0
Gender Bias	0	0	0	0	0

Other (please specify)

VITA

DENNIS C. COBLER

Personal Data: Date of Birth: March 28, 1973
 Place of Birth: Mt. Airy, North Carolina
 Marital Status: Married. Wife- Trudy
 Children: Son- Bryce, Daughter- Rily

Education: Emory & Henry College, Emory;
 B.A. Physical Education
 1995

 East Tennessee State University, Johnson City;
 M.A. Physical Education
 1998

 East Tennessee State University, Johnson City;
 Educational Leadership and Policy Analysis, Ed.D;
 2009

Professional Experience: Head Athletic Trainer
 Emory & Henry College, Emory, VA;
 1997-2004

 Program Director- Athletic Training Education
 Emory & Henry College, Emory, VA;
 2004-Present

Honors and Awards: Most Outstanding Senior in Physical Education
 1995